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Summaries of proceedings are presented for the eighth and ninth International Manpower Seminars, 1967. The order in which the contents of this volume was assembled follows the general pattern of both seminars: (1) Human Resources in Economic and Social Growth--Basic Concepts, (2) Population and Employment Policies and Measures, (3) Manpower Planning and Allocation in Economic Development, (4) Manpower Strategy, Administration, and Institutions, (5) United States Policies, Programs, and Problems, and (6) Project Aurora. Project Aurora was a simulation experience in manpower planning and development for an imaginary country, Aurora. This experience offered the members of the seminars an opportunity to put to practical use the experience, information, and background material which they had brought from their own countries, combined with concepts and ideas gleaned from the seminar discussions and field observation trips. Lists of participants and seminar leaders are included. (CH)

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MANPOWER and Active Employment Programs for Developing Countries

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Department of State
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Manpower and Active Employment Programs for Developing Countries.

Proceedings of the
Eighth International Manpower Seminar
June 1 - August 12, 1967
Ninth International Manpower Seminar
September 21 - December 2, 1967

Prepared in: U.S. DEPARTMENT OF LABOR
Manpower Administration
International Manpower Institute

Prepared and edited by Raphael Brown
with the assistance of other staff members of the
International Manpower Institute

Foreword

Two International Manpower Seminars were conducted in Washington, D.C., during 1967 by the International Manpower Institute of the U.S. Department of Labor. They were sponsored by the Agency for International Development of the U.S. Department of State to consider means for promoting economic and social development through manpower and employment planning, training, utilization, and administration. The Eighth International Manpower Seminar was conducted in English and Spanish from June 1 through August 12, and the Ninth International Manpower Seminar was conducted in English and French from September 21 through December 2, 1967.

The Eighth International Manpower Seminar, in which Sanford Cohen, Professor of Economics at the University of New Mexico, was the Faculty Chairman, included 25 representatives from 19 countries; the Ninth included 28 representatives from 20 countries. Each of the representatives was a government official, an educator, or an advisor to the government of his country. The Seminars included members from the following countries:

> Argentina, Brazil, Congo (Kinshasa), Chile, the Republic of China, Colombia, Costa Rica, Dahomey, the Dominican Republic, Ecuador, El Salvador, Greece, Guatemala, Guyana, Honduras, India, Indonesia, Ivory Coast, Malagasy Republic, Morocco, Nepal, Nigeria, Pakistan, Republic of Panama, Philippines, Thailand, Togo, Upper Volta, Venezuela, Republic of Viet-Nam, and Zambia.

The daily sessions were conducted by outstanding government and academic authorities in the United States on national and international approaches to manpower problems. Each speaker was given complete academic freedom to approach his subject in the various phases of the Seminars. An important aim of both Seminars was to provide a forum for the exchange of concepts and ideas not only between the Seminar leaders and the participants in the Seminars, but also among the members of the Seminars as well. Throughout both Seminars, it was stressed that there is no hard and fast rule which will lead to economic and social development. Every Seminar leader stressed the fact that the Seminars indicate approaches to viable economies; each country must determine its own strategies and make its own decisions based on the facts and situations which prevail in each country.

In addition to the lectures by economists, sociologists, anthropologists, demographers, and government officials, the participants had an opportunity to visit United States manpower institutions to see how manpower policies and programs are carried out. Each group visited American communities which were faced with manpower, employment, and social problems. Ealton Nelson, Manpower Advisor to the Office of Labor Affairs in AID, and

Raphael Brown, Educational Specialist in the International Manpower Institute, conducted the field trips in both Seminars. They met with local, state, and Federal officials who discussed their problems, and the policies and programs which have been devised to meet those problems.

Another phase of the Seminars afforded the participants an opportunity to draw on the first two phases of the Seminars and their country experiences; in this phase, the members of the Seminars acted as advisors and experts to the mythical country of Aurora. They were given limited facts on which to build short-range, middle-range, and long-range manpower and employment programs for the economic and social growth of Aurora.

In addition to the academic and professional aspects of the Seminars, the members of both groups had opportunities to meet with American officials, and visit Government bureaus in Washington and other communities. They visited points of cultural and historic interest in Washington and other communities. They were also afforded opportunities to visit American families and their homes to find out how Americans view themselves and people from other countries.

The completion ceremonies were held in the State Department where officials of AID and the Labor Department expressed their best wishes for the success of the endeavors of the Seminar members in their own countries.

Introduction

This volume contains summaries of proceedings of the Eighth and Ninth International Manpower Seminars, which were held during 1967. This marks a departure from previous International Manpower Seminar reports, inasmuch as it contains the summaries of two Seminars. In order to reduce redundancy, similar speeches which were given in both Seminars are reported only once.

The order in which the contents of this volume was assembled follows the general outline of the pattern in which both Seminars were conducted. The report is divided into six general segments which are:

1. Human Resources in Economic and Social Growth--Basic Concepts

   The first segment is descriptive and analytical. It is devoted to the relationship of manpower to other basic requirements for economic growth. The latter includes capital and natural resources; levels of human resource development in relation to stages of economic growth; social, cultural, and institutional factors in industrialization and urbanization; labor force distribution, utilization, and incentives; investment in human resources, and human values and social goals in development.

2. Population and Employment Policies and Measures

   The second segment deals with population in relation to food and other resources. It includes a look at national policies related to population growth, employment, and internal and international migration. Policies and measures for full employment or increasing employment levels are examined. Special attention is given to specific policies and actions which are calculated to reduce population pressures, to provide new employment opportunities, to promote active manpower and employment policies, and to improve the capability of the people to take advantage of these policies and actions.

3. Manpower Planning and Allocation in Economic Development

   The third segment covers principles, policies, and general guidelines in manpower planning and distribution. The following general topics are included: integration of manpower planning with overall economic and social planning; forecasting of manpower requirements and supply; planning to meet the gaps between requirements and supply; and planning for effective distribution and utilization of manpower.

4. Manpower Strategy, Administration, and Institutions

   The fourth segment is devoted to alternative strategies in manpower development and utilization; administrative and institutional arrangements for manpower planning, distribution, utilization, training and productivity; and approaches to education and training for manpower requirements. This segment includes manpower policy formation; information and research needed for policymaking; special structures for manpower administration; and institutions concerned with planning, allocation, distribution, utilization, and guidance of workers. Some emphasis is given to training and utilization of manpower to increase food supply.

5. United States Policies, Programs, and Problems

   The fifth segment describes approaches in the United States to manpower policies and programs. It includes contributions by the public and private sectors to the development of programs and policies to cope with manpower problems as they exist today in the United States. This segment also includes a summary of on-the-site visits to American manpower projects. There is a brief summary of government agencies which are involved in domestic manpower problems and some contributions of the United States to assist other countries in their efforts to cope with manpower problems.

6. Project Aurora

   The sixth segment is a summary of a manpower case study in which the members of the Seminars acted as "advisors" in developing a manpower program for the country of "Aurora."

The material in this volume is based on summaries of the regular Seminar proceedings. The summaries were prepared by rapporteurs who attended the sessions. The summaries for the Eighth International Manpower Seminar were edited by Sanford Cohen, the Faculty Chairman of the Seminar. The summaries of the Ninth International Manpower Seminar were edited by Raphael Brown of the International Manpower Institute. Abraham Abramowitz of the Bureau of International Labor Affairs of the Department of Labor assisted in reviewing the contents of the edited material, and Mrs. Juanita D. Coates assisted in the technical assembly of the volume.

Raphael Brown

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PART I

Human Resources in Economic and Social Growth: Basic Concepts

HUMAN RESOURCES IN TRANSITION

Edgar C. McVoy

To enhance our understanding of human resources development and manpower planning, it is necessary to examine the nature of traditional and modern societies as well as the processes of change which lead to modernization. The purely economic aspects of these processes must be tempered by an appreciation of the impact of the cultural, social, psychological, and political environment. This consideration leads to a concern with such factors as attitudes, motivations, social organization, and economic and political institutions.

Although the term "human resources" admits of no universally accepted definition, for our present purposes it will be used in a dual sense. On the one hand, human resources are one of the main factors of a nation's economic life, as are natural resources and capital. On the other hand, people are more than robots responding to various economic stimuli. Thus, the term "human resources" refers to the *people* of a nation in their capacity to contribute to its *economic* and *social* development.

"Manpower" is more specific and technical and refers to the population of working age either in the labor force or in the potential labor force.

The terms "industrial," "urban," and "higher productivity rural societies" must also be clarified. According to Wilbert E. Moore, "*Industry* refers to the fabrication of raw materials into intermediate components or finished products by primarily mechanical means dependent on inanimate sources of power."[1]

Although "*urbanization*" usually accompanies industrialization, it is essential to distinguish between them, for the former may occur largely independently of the latter. Urbanization refers to the concentration of population within a relatively small geographic area, generally with the possibility of daily transport to various points within that area.

The concept of "*higher productivity rural societies*" emphasizes that economic and social progress are not exclusively tied to industrialization.

Some countries with a basically rural and agricultural economy have become advanced both economically and socially. In addition, the current emphasis on development gives high priority to agricultural and rural modernization.

Once again, Moore's definition of "modernization" seems appropriate: "Modernization may be political and social as well as economic . . . . Modernization involves adoption of the latest procedures in administrative organization and crime control, in mass communication and public health, in education and occupational placement, in city transportation and village organization. Modernization means joining the modern world, and thus increasing its essential, though disorderly, unity."[2] Moore considers modernization to be the most comprehensive term for describing social and economic change.

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[1] Wilbert E. Moore, *The Impact of Industry*. (Prentice-Hall, Inc., Englewood Cliffs, N. J.; 1965, p. 4).

Human Resources in Traditional Societies

Basic Social and Economic Institutions. Traditional societies are usually basically agricultural and rural, although large cities with highly developed science and culture are frequently present. The main unit is the village, with little change from generation to generation. Individuals are born, grow up, work, fight battles, marry, have children, and die within the matrix of a fixed set of rules and relationships inherited from their ancestors. Political and social institutions, land ownership and use, and religious beliefs all tend to reinforce these fixed patterns. Family relationships are of paramount importance in the determination of individual roles. Since most people are farmers, there exists little occupational differentiation. Recruitment for nonfarming occupations tends to be related to family status and tradition rather than to merit and competition. Economically, most people are at a subsistence level and have little opportunity to move beyond this. Any surplus is generally gleaned by the government in the form of taxes. Barter may be a more important medium of exchange than money. Although village political control may display some democratic elements, the tribal, regional, or national authority is autocratic. R. K. Madan's observations of the economy and social structure of Indian villages are illustrative.[3] The traditional Indian village is primarily a self-sufficient economic unit centered around three basic groups closely related to the traditional hereditary caste system: farmers, village officials, and artisans and servants.

A major institutional characteristic is the joint family system of which the eldest male member is customarily the patriarch. The earnings of all family members are pooled, and the use of these earnings is carefully regulated by the family head. Since each member of the extended family receives remuneration primarily according to his needs, such a system, although it provides its participants with security, tends to discourage individuality and initiative.[4]

The modern society displays economic and social characteristics in sharp contrast; a high degree of geographic and social mobility; and considerable occupational specialization and division of labor. People are identified as individuals rather than as members of family or caste groups, although many individuals identify themselves as members of particular voluntary organizations. A large proportion live in cities or towns. Transportation and communication are well-developed as are means of diffusion of news and ideas, such as newspapers, television, and radio. Money is the primary medium of exchange, and there is either a market economy or a controlled substitute method for setting prices and wages.

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[2] Ibid., p. 6.

[3] R. K. Madan, "The Economics of the Indian Village and Its Implications in Social Structure," Social Change and Economic Development, Jean Meynaud (ed.); UNESCO, 1963, pp. 29-30.

[4] Ibid.

Some scholars have developed the concept of the "dual economy" to distinguish between the basically traditional, subsistence economy and the modern monetary economy. J. H. Boeke [5] concludes that during the colonial period in Indonesia the cleavage between the foreign, monetary sector of the economy and the domestic subsistence agricultural sector was not bridged. In Indonesia there is still debate whether the Javanese peasant is capable of participating in the modern economy. In Uganda, as a result of a combination of fortuitous and planned actions, Ugandans became involved as cotton growers for export and thus entered the modern monetary sector.[6] Table I lists some of the major characteristics of traditional and modern economies.[7]

Table 1. MAJOR CHARACTERISTICS OF TRADITIONAL AND MODERN SOCIETY

TRADITIONAL ECONOMY	MODERN ECONOMY
Non-industrial environment	Environment in which industrialization has begun and is proceeding
Predominance of a subsistence economy	Very much reduced importance of a subsistence economy
Maintenance of a relatively "autocratic" control by the members having authority over the basic groups	Trend towards the development of individual control of income and of consumption of wealth
Importance of exchange and of "give and take," etc.	Importance of competition, etc.

The Meaning of Occupations, Jobs, and Labor. In the traditional society, there is not much meaning to specialized job or occupation, and the employer-employee relationship is not highly developed. By contrast, in the modern society, occupation and job become important objectives, and primary determinants of an individual's social status. In the realm of employer-employee relations, labor unions and similar organizations play an important role.

Motivation and Incentives. The study of motivation and incentives in traditional versus modern societies is complex but extremely important in planning. For example, in the traditional society, people do not respond as readily to the direct economic incentives as they do in the modern one. This does not imply that they are not interested in economic gain, but rather to suggest that the concept is different.

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[5] J. H. Boeke, "Capitalist Development in Indonesia and in Uganda: A Contrast," in ibid., pp. 90-98.

[6] Ibid.

[7] Source: G. Balandier, "Comparative Study of Economic Motivations and Incentives in a Traditional and in a Modern Environment," Social Change and Economic Development, pp. 29-30.

In the traditional society there is no ingrained incentive to accumulate wealth. There may, for example, be a tradition of community sharing which may function to dampen individual initiative. In addition, religious factors often urge the acceptance of one's suffering and fate as the will of some supernatural entity. There exists also the fear of the unknown and the associated reluctance to take risks.

These characteristics of the traditional society are related to a theory some economists hold, "the backward-sloping supply curve of wages," which is related to the notion of "labor commitment." For example, a traditional villager will work for wages (on a plantation or in a factory) only until he reaches a certain minimum amount of remuneration. His basic commitment is still to the family or village, not to the plantation or to the factory.

With the modern society, however, commitment shifts to place of work, often manifesting as a commitment to a labor union and similar organizations. Individuals become motivated by income and prestige factors. High premiums are placed on the value of work, the accumulation of wealth, investment, and the prestige of occupation.

Social and Economic Structures for Human Resource Development

In the area of planning for economic development, it is becoming increasingly realized that cultural and institutional factors are quite as important as the purely economic ones. Albert Waterston[8] and his associates have found that too little attention has been paid in planning to the political, social, and cultural structures and processes essential for the execution of development programs.

What, then, should be the approach to the structure for development? There is no simple or single answer. One of the most important alternatives involves a choice between almost complete central planning or partial planning. Closely related is the degree of centralization or decentralization of control and responsibility. The experiences of certain European countries are interesting in this respect. Yugoslavia serves as a prime example. Although Yugoslavia is still basically a Communistic country with a philosophy of central planning, it is operating partly as a free enterprise economy. There is a great deal of decentralization in decision making, particularly in agriculture and the state enterprises. The Yugoslavian experience is not a model, but dramatizes the possible alternatives.

Conclusion

It is important to emphasize that development is a process, not simply a fixed goal. Descriptions of traditional and modern societies are in many ways artificial in suggesting extreme either-or situations. To illustrate, although the United States is considered one of the most developed and modern societies in the world, development continues and many problems are yet to be resolved. The United States represents an affluent society for some 75 percent of the population, but even that sector has many pressing problems, particularly in urban congestion and transportation. For the 25 percent or so who are not yet members of the affluent society, life leaves a good deal to be desired. Although considerable efforts are being made to remedy these conditions, their existence provides evidence that we have not reached a fixed goal.

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[8] Albert Waterston, "What Do We Know About Planning?" Industrial Development Review, December, 1965, pp. 2-10.

Change generates change, and the elements of technology introduced into this country have gone far beyond our social-political capacity to cope with them. This, in fact, is the challenge of our generation.

In the developing countries of the world, there was perhaps a tendency at one time to think in terms of five-year targets for development. It is not enough to think in piecemeal terms, however. Development is a dynamic process which requires constant attention and review. Therefore, any agency responsible for the planning of economic development should be so organized as to allow the implementation of development plans on a continuous basis.

THE RELATIONSHIP OF SOCIAL ANTHROPOLOGY TO MANPOWER PROBLEMS IN PEASANT COMMUNITIES

Ralph W. Nicholas

The problems of underdeveloped and developing countries are problems of rural societies. The majority of the population in these countries is in rural areas, and in many of them agricultural production still comprises a large proportion of the GNP. In most of the underdeveloped world, the indigenous rural societies are either tribal or peasant, and as the peasant community predominates, it will receive the emphasis in this presentation.

Multiplex Nature of Peasant Societies

It is essential that manpower planners be aware of the multiplex nature of peasant societies. By multiplex we mean that people are constantly engaged in face-to-face social relations in which they take many different roles. A man may be at one time, with respect to the same people, a priest, teacher, judge, law officer, and father. To remove such a man would have a serious effect on decision-making within the community. This provides an example of the way in which a minor change can produce major disruptions in a peasant society and points to the importance of detailed knowledge of such a society on the planner's part.

Probably the best evidence of the multiplex social relations within a peasant society is its great emphasis on ritualization. Ritual is very important if a man is to convincingly change his role from that of farmer to that of judge, for example.

Because religion, kinship, politics, economics, and social stratification are bound into a single system in peasant communities, the work of cultural anthropologists is important to economic planners in that anthropological research produces a totalistic comprehension of the society under investigation. To attempt to draw conclusions from a study of the economic system alone is dangerous because of the impossibility of isolating one aspect of peasant life from the others to which it is so closely related.

Peasants' Conception of the Economic System

After describing the totalistic nature of a peasant society, we will ignore it temporarily, nevertheless, to look at the peasant's conception of his economic system. The primary fact here is that he thinks in terms of economic stagnation instead of growth. He is convinced that growth in any one area or sector of his economy will be offset by loss in another area--in other words, that gain plus loss will always be a zero sum. "Since my economy consists of a fixed quantity of productive resources," he thinks, "it means that one man's advantage is always obtained at another's loss." This is important to understand for anyone concerned with peasant participation in economic development.

In Latin America, Asia, and Africa, both the peasants and the economic planners agree that inadequate production of food is the primary problem in these areas. The cause, generally, is not shortage of labor but lack of capital and technological sophistication. Given general agreement concerning what the objective of a rural development program should be, it is then necessary to devise a means of accomplishing it. In doing this, it is vital that the planners take into account the peasants' conception of their own situation.

One of the most widely acceptable procedures for finding the peasants' point of view is democratic participation in the planning process. But we must realize, in using this procedure, that the peasants, as well as the most sophisticated of planners, frequently hold goals other than maximum increase in production. Although their scale of values often coincides to a great extent with that of the planners in regard to priorities in a development program, a problem in coordination between the local and national levels frequently appears because the economic planners do not see the peasants as the peasants see one another.

The probable result of this disparity of viewpoint is exemplified by the case of India. Panchayats were village councils of five men, established to provide political leadership in rural areas. One of the functions of a panchayat was to develop local economic plans in cooperation with government economists. One of these councils' major accomplishments was the stimulation of factional conflicts and a kind of constant, low grade village warfare.

Why did these councils stimulate so much dispute? In my investigations I found that, although everyone agreed on goals and priorities, everyone was also more interested in what advantages his own particular group might gain from a project than in the welfare of the entire community.

This shortsightedness can be understood only when we realize the multiplicity of relations within a peasant society and understand the peasant's conception of the meaning of economic growth.

Rural Community Planning

I do not want to imply that nothing has been accomplished by the decentralization of planning or by the creation of democratic local planning bodies. What I am saying, rather, is that it is necessary for us to understand intimately what goes on in rural communities in order to proceed intelligently with the implementation of plans.

The East Pakistan Rural Public Works Program, established collaboratively by villagers and the Governments of the United States and Pakistan, provides further examples of the problems that arise when planners do not have adequate understanding of local communities. The East Pakistan Planning Commission gave impetus to the program under which U. S. wheat, plus surplus rupees owned by the United States, were used to fund a large-scale project aimed at employing poverty-stricken agricultural laborers during the slack season in the construction of roads and embankments and the digging of canals and drainage channels. Local planning units were established, and, generally, were easily able to reach agreement concerning the objectives of the program. Labor was quickly contracted through the boss system.

Quite soon, however, two major problems were encountered. One was the East Pakistanis' dislike for wheat. It was very difficult to get them to accept wheat as payment, and when they did, they would sell it for rice, obtaining, of course, a lower price for the wheat than for an equivalent amount of rice. A second, more serious problem resulted from the peasants' idea that Government has an endless supply of wealth that can be endlessly tapped to everyone's benefit. The object of agreeing to participate in one or more of the rural public works programs was often not that of building a road or excavating a canal, but of getting some of that "bottomless" money supply.

This example indicates, actually, two types of planning problems regarding development of peasant communities. One is that which I have stressed here--that of coming to understand the kinds of social relationships in which the peasant worker is involved.

The other concerns the villagers' perception of their own situation. There are two pertinent aspects of this perception. One is that they see their economy as incapable of growth, as a system in which, when one gains, someone else has to lose. The other is that they see Government as abstract, external, and infinitely wealthy.

Thus, the point of this part of my argument is that we need education on both sides. We need to learn something about the villagers and how they see things. We also need to make it clear to the villagers that Government is a human creation.

INDUSTRIAL LABOR FROM TRIBAL AND PEASANT SOCIETIES

Ralph W. Nicholas

A common assumption about the process of industrialization, and, in particular, about the process of recruiting an industrial labor force from preindustrial societies is that these processes must destroy previously existing forms of social organization.

Such an assumption is misleading in that there is really no final way to judge the quality of life of any particular group. In fact, there is some evidence to show that tribal and peasant life has, in the past, been filled with at least as much frustration, bitterness, and uncertainty as urban life.

There are, however, important differences in the nature of social relationships between the village and the city. When movement from a rural to urban setting occurs, the individual is forced to adopt different roles in his behavior. In the village, each role is characterized by a multiplex situation. The urban area is characterized by simplex roles. Here situations are extremely impersonal. Thus, the clerk from whom a pack of cigarettes is bought is only involved in that one small aspect of a person's total existence. One constantly meets and deals with strangers.

We can make this distinction between urban and rural life, but we must be careful not to go too far. Multiplex roles also occur in cities where groups of people live, work, and play together. In general, however, there are problems for an individual in moving from a predominantly personal life (rural) to a predominantly impersonal one (urban).

Today there are practically no societies that do not know about and use money in some exchange system. But, there are generally differences between tribal and peasant society uses of currency or cash. In some areas of the world, money has been forced down the throats of tribal peoples. For instance, in Africa, the impetus to work for wages was not very strong in the eighteenth and nineteenth centuries. The British, who governed these areas, imposed a tax which had to be paid in currency rather than in goods or services. In order to pay the tax, the tribal people were "forced" to work in the industrial areas such as mines and factories.

In peasant societies on the other hand, monetary systems have been in effect for centuries. The peasant has always existed in relation to an urban settlement. Thus, a system of exchange was a necessary condition of existence. In fact, one definition of a peasant is "a small scale producer for the urban market." There were always taxes to pay and landlords to collect rent in the peasant areas. A cash nexus was established as a basic condition of survival a long time ago.

There is, however, a basic difference between the economy of a peasant society and the economy of a price-making market where most or all transactions are monetary ones. Let me illustrate this with an example from India. Cash is generally used to pay a dowry in order to get a husband for one's daughter. Yet this same man would never pay cash to his household servants or his field workers. They would always be remunerated in goods or clothing. Thus, in the peasant economy, there is a compartmentalization that prevents the cash economy from entering all spheres of economic life. In general, because of his monetary exchange history, it is easier to induce a peasant to enter the industrial labor force than it is a tribal person. It may take more than monetary inducements to enlist the services of the latter.

While there are substantial reasons for going from village to city life and great changes that must come about because of this movement, it is my personal belief that there is a good deal to be gained by bringing industry to the rural parts of the developing countries. Although, in general, industrialization and urbanization are highly correlated, it is not a necessary relationship for the existence of industry. I would like to cite two examples which show the success of an industry in the rural setting.

The first is taken from an article written by Manning Nash called "Machine Age Maya." It is a study of a municipio called Cantel and the introduction and survival of a textile factory there. In 1876, the factory was built there by an outside group of powerful people. The leaders, or, as they are known, the principales in Cantel, who were the carriers of tradition and the opponents of change, fought the factory and allowed no local people to work in it. However, the local principales were not sufficiently powerful to have the factory removed and so it remained in Cantel, operated by outside help.

By 1890, it became apparent to the young men of the village that they could make much more money by working in the factory than they could as agricultural laborers working in the village. Gradually, some of the important local people began to move into factory employment and to take some responsibility in the operation of the textile plant. Today, the factory is run almost exclusively by native personnel. The principales learned that the factory, instead of hurting them, helped them to earn more money and this in turn enabled them to remain powerful in the village. As it turned out, the accommodation to the factory was not a difficult task.

As the factory was in the process of being integrated into the community, there were some areas of tension. New areas of housing were created in ecological proximity to the textile factory that were outside the usual control of the principales. Also, changes were necessary in living patterns in that sons were no longer working on their father's land. And, as in any industrial situation, there was a need for more centralized work organization. However, these problems were worked out with a minimum of difficulty.

The second example is from a study I was personally involved with in a rural area in West Bengal, India. There is a sugar mill located there and from the point of view of the local peasants, it is a tremendous advantage in that it operates only part of the year. This allows the peasants to work in the mill some of the year and still perform their necessary agricultural tasks.

The mill is run by four different groups of people: two from outside of the local area and two indigenous groups. Of the outside groups, one is of a high caste of sugar makers, and the other is from a lower caste who work as coolies doing the heavy labor. The local workers are made up of a group of Muslims who perform all the transportation activities needed and a group of high caste Brahmins, who are the skilled machine repairmen in the mill. I was surprised to find people of the Brahmin caste working in the mill. But, I discovered they were not allowed to do any agricultural labor due to their religion and, thus, it was rational for them to be engaged in this skilled occupation. Since they could read and write, they were able to work with the diagrams that were needed to repair the machinery.

The importance of this mill is in its seasonal character. Men who would not be able to leave the rural sector on a permanent basis make efficient and skilled workers for part of a season. Thus, for industries that require seasonal operation, such as food processing, it may be useful to think of locating factories near rural communities. This would diminish the frustrations which occur when the labor is forced to leave the rural areas and migrate to the city.

HIGH-LEVEL HUMAN RESOURCES AND THEIR RELATIONSHIP TO ECONOMIC AND SOCIAL DEVELOPMENT

John C. Shearer

High-Level Human Resources--Definition

High-level human resources may be defined as those persons who, by virtue of their relatively high educational and/or occupational attainments, embody significantly greater than average knowledge or skill. They play key roles in economic and social development as a nation's leading thinkers, planners, adapters, and "appliers."

The significance of this type of personnel can be shown by the experience of an important Latin American nation whose planning commission recognized that a major land reform program was essential to progress. Upon initiating this program, the commission encountered an unanticipated and critical shortage of people capable of making decisions regarding the constant stream of problems that appear as such as a program progresses. In the entire nation, only two people were found who were qualified to make decisions in this area. As a result, this nation's economic progress was jeopardized.

In many developing countries, high-level human resources are those persons who have attained education beyond the secondary level or whose occupations require an equivalent level of knowledge or skill gained through experience. Educational investments in human beings have many noneconomic goals, but educational investments are also the means for increasing the potential of humans as producers.

The term education is used here to encompass all means, formal or informal, for developing knowledge or skills. In the case of high-level human resources, formal education is probably the most significant of these means, and it is more susceptible to measurement than are other forms of education. Measures of formal educational attainment, that is, of level and nature of training, often constitute good approximations of the stock of human resources in a given population.

Developing High-Level Human Resources

Many universities have not related education to their society's needs, giving little attention, for example, to physical sciences, engineering, and agriculture, and an unwarranted amount of attention to law and classics. In Argentina, for example, only 2 percent of those who will receive a university degree are being trained in agriculture. The best Latin American universities, however, have established strong ties with the communities which they service, and on the basis of these ties, are able to train graduates in anticipation of the communities' needs.

Probably the most critical shortages of high-level human resources in most developing countries are in the fields of administration and management. Although it is possible to effectively teach administration in the university, training in either business administration or public administration is very rare in these countries.

Other significant forms of investment in high-level human resources include those in which employers, public or private, use various means to upgrade selected employees through training programs, seminars, or through job rotation. Such investments by employers are often more efficient than are similar efforts by universities because of the necessarily close relationship between employer needs and employer investments. Nevertheless, the effectiveness of such employer investments depends greatly on the strength of the education base provided by the universities.

Another important device for developing high-level personnel is foreign training. This type of training can often make unique contributions to rapid improvement of a nation's knowledge and skills by providing educational resources which are not easily available at home. An example of successful use of foreign training involves India. Her critical needs for technical personnel in the steel industry demanded imaginative use of such training, and she has made the most of United States, Russian, and German "know-how."

In cooperation with these countries' governments, India sent to each of the three nations over a five-year period, hundreds of engineers and administrators who were, or would be, connected with the steel industry. In the United States, these people filled positions four days a week, comparable to those they would be holding in India. One day a week was devoted to university courses, the time divided equally between technical subjects (especially metallurgy) and economics and management. This program, as well as those in Russia and Germany, made important contributions to India's high-level human resource supply.

The United States currently hosts 83,000 university students from other nations, 75 percent of them from underdeveloped countries. A high percentage goes on to graduate-level foreign training representing a massive investment in high-level human resources. However, my study of the relevance of university training in the United States for the high-level manpower needs of other countries reveals that such training often is unrelated to the areas of greatest importance in national development. The data for Latin American graduate students in the United States strongly suggest that few countries use this valuable opportunity effectively. There is, for example, little attention paid to agricultural specialties--a very significant lack, in light of these nations' needs.

Problems in Utilization of High-Level Human Resources

Special problems impeding many nations' attempts to make maximum use of their high-level human resources are those related to the mobility of these resources. These problems have been defined as a result of studies of population movements within Latin American countries and between Latin America and the United States.

The four problems are:

1. Wealthier areas act as magnets which attract human resources, and especially high-level human resources, from poorer areas.

2. These movements of human resources constitute major subsidies of the richer areas by the poorer areas.

3. The costs to many poor areas of such movements constitute significant offsets to any aid (which itself may be in the form of high-level human resources) provided to these poor areas by rich areas.

4. The movements of high-level human resources may, to a great extent, account for the persistent and often widening gaps between rich and poor areas.

Large-scale migrations of people from the countryside and provincial cities to the capital city are occurring in many underdeveloped nations. This influx into the capital cities has profound social, economic, and political implications, one of the most significant being that, in many nations, it constitutes a heavy subsidy of the richest by the poorer areas. Among the migrants there is a large number of young people who are near the beginning of their most productive years and who have only recently ended their period of total dependence on the community. Thus, the capital, already the richest area, obtains the benefits of the investments made in human resources by the poorer areas.

International Flow of High-Level Human Resources

The richest nations attract considerable high-level human resources from poorer countries, just as rich areas attract these people from poorer areas within the same country. The United States is an especially strong magnet for the scarcest skills of many developing nations. During 1949-1961, about 33,000 engineers and 10,000 scientists, a combined average of more than 3,300 engineers and scientists per year, immigrated to the United States. The South American countries, and many others, have been losing engineers to the United States at the rate of more than 300 per year.

In recent immigrations from all foreign countries to the United States, we found about 25 percent of those reporting an occupation were in the category of professional, technical, or kindred workers. This is more than two and a half times the proportion of the United States labor force in this category. This heavy influx of high-level human resources constitutes a major reverse flow of foreign aid from these poor countries to the world's richest nation.

A major inflow of high-level human resources to many developing countries is represented by the bringing in of foreign employees by foreign companies. Despite the potential benefits represented by such foreigners, my studies show that these inflows are often of little aid to the host country and may, in fact, seriously impede the development of national high-level human resources.

Conclusions

From a study which I made a few years ago of policies and practices of 52 representative United States firms, I derived the following conclusions:

1. In spite of the high cost of maintaining North Americans in management positions in their Latin American subsidiaries, and in spite of their claiming that company policy was to employ "the maximum number of nationals," home office executives hire North Americans for the bulk of the top management positions.

2. Two justifications for this policy were advanced:

   (a) North Americans are hired to provide more effective control of these subsidiaries. My study revealed that the parent companies manage their foreign branches closely, precluding the possibility of a significant amount of control by North Americans living in Latin America. Thus, this argument is weak.

   (b) Efficiency was the main reason given for employing 85 percent of the North Americans with whom my study dealt. This efficiency motive is based on the alleged inability of the North American firms to recruit, develop, and retain qualified nationals.

3. A major reason for these firms not hiring qualified nationals is that they do not attempt to approximate, in Latin America, the effective recruitment procedures used in North America. In Latin America, the universities, typically, are expected to contact the firms concerning prospective employees, and the students must bear the costs of interviewing, recruitment, etc.

4. Related to this fact is another--the failure of companies to hire, for positions in their subsidiaries, foreign students graduating from North American universities, in spite of their protestations about the desirability of hiring such people.

5. Management of foreign subsidiaries is generally comprised of second-rate personnel. This is so because in most firms the better employment opportunities are found in the United States rather than overseas; and because firms insist that their overseas executives work on a career basis. The belief is that even second-rate North Americans are preferable to the best available nationals. Such a policy has a strong

negative effect on the development and use of nationals, as most overseas North Americans feel strongly about protecting the jobs they recognize as far better than what they would be holding in the United States.

6. The low ceilings on opportunities for nationals compound the impediments to the efficient development, use, and retention of national high-level resources by stifling morale, motivation, and effectiveness. That this is true is seen in the high quit rates for foreign personnel employed by United States firms.

NATURE OF LABOR MARKETS IN DEVELOPING COUNTRIES

Everett B. Hawkins

Economists would generally agree that customs, regulations, and markets are the three major systems which contribute to overall economic stability. In many rural areas of the world today, custom still plays the major role in determining what shall be produced, how it shall be produced, and who will consume that which is produced. The effect of customs is still apparent in the more advanced countries, albeit to a lesser degree.

Various kinds of regulations also affect economic life to some degree in all countries. In the labor area, for example, there are regulations which pertain to minimum wages, trade unions, child labor, hours of work, and so on. In addition, various kinds of markets affect economic development and maintenance. The present lecture describes only one particular kind of market, the labor market. But, remember, it does not exist in isolation from the other types of markets, government regulations, or customs in a given society which together create the overall temper of a given economy.

Size of Labor Markets in Developing Countries

The labor markets in the developing countries are likely to be small relative to the population of the country itself. Table II concerning Indonesia illustrates this. (See page 17)

To arrive at the actual working force (96.3 million), we must first subtract the number of dependent children from the total population. In Indonesia this group, which according to census definition included children through nine years of age, constituted over one-third of the population. Thus, less than two-thirds of the population in Indonesia were in the working age population.

Further, one-third of the people in this working age group were not working. Women, especially during the child-bearing ages of life, are generally not in the labor force. When they are working, it is often on a part-time or temporary basis. Approximately 19.5 million women fit into this category.

Another 6 percent of the population ten years of age and over, or 6.4 million people of working force age, are still in school.

The working labor force, therefore, comprises only abour 34 percent of the total population.

Furthermore, only a fairly small percentage are paid a wage or salary. About 10.5 percent of the total population and 31 percent of the labor force are self-employed; farmers, drivers and carriers, traders and salesmen, independent craftsmen, food sellers, etc. In addition are numerous unpaid family workers, accounting for 9.9 percent of the population and 29 percent of the labor force.

Another 7.5 percent of the labor force (2.6 percent of the population) are employers. This means that 11.0 percent of the people in Indonesia are wage and salaried workers. Even this figure could be further refined because it includes people who are influenced more by custom and regulation than labor market forces.

This figure is typical of most developing countries. In contrast, the more highly industrialized countries have a far greater percentage of their labor force receiving a wage or salary. In the United States, for example, about 85 percent of the labor force receive a regular wage or salary, while the remaining 15 percent obtain a profit through some other means.

Table II. RELATION BETWEEN TOTAL POPULATION AND THE LABOR FORCE IN ALL INDONESIA--1961 CENSUS[9]

	Million	Percent of Population
Total Population excluding W. Iran	96.3	100.00%
Children 0 - 9 years old	32.3	33.5
Population 10 years and over	64.0	66.5
Still in school 10 years and over	6.4	6.7
Remain at home (mostly women)	19.5	20.2
Others	3.5	3.6
Labor Force 10 years and over	34.6	36.0
Unemployed	1.9	2.0
Working Labor Force	32.7	34.0

LABOR FORCE

	Percent	Million	Percent of Population
Employers	7.5	2.5	2.6
Self-employed	31.0	10.1	10.5
Unpaid family workers	29.0	9.5	9.9
Wage and salaried workers	32.5	10.6	11.0

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[9] Source: 1961 Census of 1958 Labor Force Survey.

Fragmentation of Labor Markets

With the exception of some very small countries, it is very difficult to talk about a national labor market. The market is broken down by regions, cities, and locales. In some cases, you may get down to a single employer and his relationship to a worker.

The two primary reasons are inadequate dissemination of job information and lack of worker mobility. People just do not know about job opportunities in other parts of the country. There have been various attempts to fill this information gap. Employers often set up recruiting programs; however, employer recruiting, particularly in some of the African countries, has tended to be less than sound employment practice, since the employer is able to take advantage of the rural worker who has no other source of information about the job than the employer himself. Other employment plans--public employment offices, joint plans, etc.--have been equally lacking in sound information concerning the nature and location of job opportunities.

There is a general lack of worker mobility, particularly in developing countries. People like to live in the community in which they were born and raised. Others are afraid to leave for fear of losing their lands. Further, it is often difficult to absorb the financial burden of moving from one place to another.

The Imperfection of Labor Markets

Labor markets are imperfect to a greater or lesser degree in all countries. In the United States, for example, I am impressed by the imperfections in the labor market as compared to the relative perfections in the corn market, the rubber market, and the stock market. It is usually maintained that to have a perfect market, there must be many buyers and many sellers. Frequently, however, a single employer, or a group of employers banded together by a formal or informal agreement, will decide not to pay above a certain wage. This is a particular problem in developing countries where the relatively few employers are apt to adopt restrictive policies.

Labor may also use restrictive policies. Workers may, by themselves or through unions, decide to restrict output until certain conditions are met by the employer. There may even be organized labor gangs which will not permit other laborers to work unless the gang is paid a special fee; in order to get a job it is necessary to go through a gang boss. Thus, the imperfect labor market in many countries is the result of lack of free competition among both laborers and employers.

Another factor, alluded to earlier, is inadequate dissemination of full and free information in the developing countries and, to some extent, in many of the more highly industrialized nations.

A factor often overlooked is the differences in individual skills and abilities. For this reason, it is much more difficult to establish an effective market for labor than it is for wheat, cotton, or rubber. With regard to unskilled labor, these differences are, perhaps, not great. However, one of the primary concerns in industrial development is the creation of a skilled labor force. When this happens, the market itself must be in a position to take into account differences in skills and abilities. I would like to emphasize this point with regard to incentives. If an individual's abilities are not recognized, he may not be given the incentive to work his hardest. On a large scale, this means that the labor force as a whole is not being utilized to its fullest capacity.

Finally, governmental regulations and the customs of a given country, the two other major economic aspects mentioned at the outset, may hinder the development and maintenance of a perfect labor market.

I have tried to make three major points. First, the labor market in the modern sense will tend to be very much smaller than the total population. Secondly, the labor market tends to be a fragmented market. Finally, the labor market tends to be an imperfect market.

Special Problems of Labor Markets in Developing Countries

It is probably true that, in most of the developing countries, the rural population constitutes between 50 and 75 percent of the total population and the labor force. We must come to grips with the problems of the rural areas. The rural area is the most traditional; it is the area with the fewest employers; there are usually no unions; and it is very difficult for the employment service to reach. Yet, in developing countries, one of the greatest problems is to determine how the rural population can be more fully utilized.

One aspect involves the state of rural technology. It is necessary to introduce more advanced agricultural techniques into these areas to enable the rural population to increase production. It has been said that we should make the farmers so productive that it would be necessary to have a smaller percentage of the rural population involved in purely agricultural work. The countries which have experienced industrial development have gradually become able to produce food for their own people, and in some cases export food, with a smaller and smaller percent of their labor force, leaving people available to do other jobs.

A second measure is the introduction of small industries in rural areas to make use of the local labor supply, especially during the off-season when the workers are not busily engaged in the crops.

A third is the initiation of community development and improvement programs, not just to increase income and production, although these are extremely important, but also to raise the general educational level. This would bring about the changes in attitudes necessary for economic development.

Also important is a better system of transportation because modern scientific agriculture requires an efficient system for transporting inputs into the rural areas and outputs out of them. This tying together of the rural network is a fundamental requisite of an adequate marketing structure.

Another important consideration is the movement of people out of the rural area. In some countries, many problems have been created because all of the migration has been directed to a small number of the larger cities. A much better strategy is to encourage migration to more of the smaller provincial cities, thus spreading the burden of an extensive population relocation. One way of accomplishing this is the development of industries in the smaller areas, rather than merely concentrating in one or two of the major cities. Proper rural-urban migration will usually result in the transfer of people from less productive to more productive jobs and thus bolster economic development.

A second major problem area falls under the heading of job inflation, meaning the necessity for workers to occupy several jobs in order to meet rising costs brought on by inflation. It is primarily an urban phenomenon and terribly disruptive to the labor force, contributing a great deal to inequality of income and working great hardships on workers with fixed incomes.

In 1963, for example, workers in Djakarta could only buy about one-third of what they could buy in 1958 for the same amount of money. During the same period, real wages had fallen about one-third to two-thirds. As a consequence, workers were forced to get extra jobs to support themselves and their families.

We are not talking about merely taking on another job in order to bolster the family income, known as "moonlighting" in the United States. Rather, we are talking about taking on five, six, or seven jobs in order to meet the normal requirements of everyday existence.

The taking on of a single extra job probably has more positive than negative aspects. If a person has a scarce skill, for instance, by taking on an extra job he may contribute to increased productivity in the economy as a whole, as well as adding to his own family income. He may also acquire some new training experience on his second job which will add to his own personal value in the labor market. There may be some losses in terms of an individual's ability to work two jobs efficiently, but in the long run, the gains outnumber the losses.

However, when people are working, not two, but five, six, or seven jobs, the negative aspects far overshadow the positive. There is a definite dilution of skill resulting from mental and physical fatigue. In addition, a considerable amount of time is wasted in moving from job to job, particularly in areas in which transportation is inadequate.

Therefore, with job inflation of this magnitude, there is actually an overall reduction in the amount of real output by the economy, even though individual incomes are being increased. It is a fundamental economic principle that increased income accompanied by decreased output further contributes to economic inflation. Therefore, the relation between economic and job inflation is a vicious circle; each feeds the fires of the other, in the long run proving mutually detrimental to both the individual worker and the economy as a whole.

AGRICULTURE'S ROLE IN ECONOMIC AND SOCIAL GROWTH

Garland P. Wood

What is agriculture's role in economic and social growth? Agriculture has the responsibility of providing a sufficient quantity and variety of food for the population. Also, it is expected to supply the fibers, such as wool, cotton, or jute, to be further processed by the nation's industry. Finally, in some nations, agriculture is expected to furnish a surplus which will be available for sale on world markets.

How does agriculture measure up to its role? The proportion of agricultural workers among nations varies from as few as 6 percent to as much as 85 percent of a nation's work force. There seems to be, in fact, an inverse relationship between the proportion of people in agriculture and their ability to produce. To illustrate: Over the last 15 years, there have been more agricultural exports from the industrialized nations to the underdeveloped than vice versa, and this relationship is expected to continue. What, then, are the possibilities of increasing food production among the underdeveloped countries?

If we turn to Latin America, we see that the contribution of the agricultural workers to gross product is small. In addition, their productivity and earnings are low. It is estimated that for every dollar of purchasing power obtained by a rural worker, a construction worker received $4.40. And the farmer receives even less than this relative to workers in other sectors. Moreover, rural families tend to be larger; hence, their standard of living is lower.

Before we consider any recommendations, let us examine the characteristics of agriculture in these developing countries. First, we see that the agrarian sector is largely on a subsistence basis. Most of the output is consumed either on the farm or in the immediate environment--in short, there is little market orientation. Second, agriculture is labor intensive; that is, there is a large number of workers per unit of output. A third characteristic is the low level of technology. There tends to be a poor variety of crops, low production capacity, and inferior strains. Also, there seems to be little weed and insect control and not much use is made of fertilizer. We find, as a fourth trait, that the marketing system is a tremendous bottleneck. There are, for example, many middlemen through whom the product must pass on its way to the market. This may result in a 25-35 percent waste of the product before it reaches the consumer. On top of this, the pricing mechanism fails to provide a guide as to what and when the farmer should produce. The last characteristic to be mentioned deals with taxation systems. In a majority of cases in the rural areas of developing nations, these systems are inadequate and inequitable. They simply do not gather sufficient resources to build the roads, the schools, and other infrastructure on which commercial agriculture may be built.

Let us change our approach now and look at the characteristics of agriculture as we think they should be from the perspective of an industrial nation. We in the developed nations think it should be market oriented and capital intensive. We judge it in terms of high productivity per man.

The difference between "what is" and what we think "it should be" might be called the "realization gap." The steps between what is and what should be are knowledge gaps that span generations and centuries and are only slowly eliminated. In the underdeveloped nations--unlike the industrialized nations--stability has been reinforced and desired; to many of these countries, change poses a threat as it has often resulted in less for the little man and more for someone else.

If we are to deal understandably with the "realization gap," it will be necessary to have a better understanding of tropical agriculture, how to motivate its production and improve its quality. Inadequate marketing structures must be modified so that less is wasted and so that the bargaining position of the producer is improved, enabling him to earn a higher return on his investment.

How might we use labor more efficiently to overcome problems of underemployment and lack of food and fiber? Here are some tentative hypotheses gathered from my readings and research:

1. We may achieve a fuller use of labor by spreading out peak labor loads, say, by crop diversification. Sometimes, irrigation may be needed to introduce this new form of crop or livestock. Double cropping, for example, took place where irrigation was used in a project in Mexico.

2. More labor intensive machines possibly should be introduced to the primitive regions. This is not to say that agriculture does not need more investment--it certainly does. Most of these countries, however, are short of capital but have an abundant supply of labor. Thus, by following this proposal, they will be taking advantage of existing resources.

3. Perhaps we should give more attention to agri-business. That is, we should improve marketing techniques and make more use of insecticides, herbicides, better crop strains, and fertilizer so as to make the farmer more productive and the marketing process less wasteful. Perhaps we should encourage the location of some industry in rural areas through tax incentives and subsidies.

4. Vocational training is needed for the people who will remain in agriculture as well as for those who will migrate to urban areas. The migrants tend to move to the cities undertrained.

5. We can build the needed infrastructure in the rural regions by bringing into play the underused labor to build drainage ditches, roads, and schools, etc.

CONCEPTS AND LEVELS OF HUMAN RESOURCE DEVELOPMENT

Charles A. Myers

A Short Review of the Interest of Economists in the Economics of Education and Human Capital Formation

The interest of economists in the economics of education and human resource development is of relatively recent origin. In 1960, Professor Theodore Schultz, the President of the American Economic Association, emphasized the need for a broader conception of "human resources." He argued the failure to recognize and treat human resources as an important form of capital fosters that outmoded notion of classical economics which conceived of human resources as only the capacity for doing manual work requiring little knowledge or skill. Although economists have taken a long time to realize the value of investment in human potential, at least two historical figures demonstrated a keen awareness in this respect: Adam Smith, who emphasized the need for recognizing the acquired and useful abilities of people as a part of fixed capital; and Alfred Marshall, who continuously reiterated his conviction concerning the value of capital investment in human beings.

Various attempts to measure the contribution of education to economic growth have started in the United States, partly as a result of the interest and influence of Professor Schultz. It has been found, for example, that the ratio of the stock of investment in education to the stock of investment in physical capital in the United States rose from .22 in 1900 to .42 in 1957. That is, investment in educational capital relative to physical capital has nearly doubled during the first half of this century.

Another approach is that of Professor Fritz Machlup of Princeton University, who revealed that in the United States approximately 12 percent of the GNP is invested in the production and distribution of knowledge. Among the numerous factors included were the costs of formal education, schools, teachers, and books. There were also the costs for the development of private schools and colleges, the expenditures for libraries, on-the-job and military training expenses, and the cost of education in the homes.

Professor Edward Dennison concluded that in the United States between 1929 and 1957, investment in education accounted for 42 percent of the increase in per capita income. This is a controversial finding but has at least some basis in the statistical methods employed.

A fourth approach to measurement lies in estimating the increased income accruing to individuals by virtue of their educational attainment and discounting these figures to their present value. Professor Schultz found that between 1900 and 1950, the rate of return on education in the United States averaged between 5 and 10 percent. The extreme difficulty in calculating a valid and reliable return for investment in education is compounded by the fact that increased earning over a lifetime is indicative not only of educational attainment, but also of other factors such as social status, job performance, and the like.

A study by Ingvar Svennilson, an OECD Swedish economist, investigated the interrelations between school enrollment ratios and GNP for some 22 countries. The investigators concluded that there was a relationship between these variables and noted that a country with a low GNP cannot afford to have most of its teenagers withheld from gainful employment for the purposes of education, and that a highly industrialized society with a high GNP per capita can hardly afford to terminate the education of most of its youth at age 14.

At least generally, therefore, the income level, expressed as per capita GNP, appears to set the lower bound to educational effort. Above that minimum, however, remains a wide margin for choice as to whether to invest heavily in educational development to accelerate economic development.

The Need for a Broader Concept of Human Resource Development: The Importance of High-Level Manpower

The interrelationship obtaining among the factors of education, manpower development, and economic growth immediately broadens the concept of "human resource development" to considerably more than merely a matter of formal education. Individuals acquire skills and knowledge on the job, as well as through various kinds of training programs outside the formal school system. In addition, people are characterized by certain personal incentives which may be largely independent of their skill, and educational and job experience.

These and other factors reflect the need for a concept of "high-level human resources." In many of the developing countries of the world, for example, there are generally more people available than there are positions. What is lacking in most instances are those particular skills and abilities essential for economic development, the most crucial of which are encompassed by Harbison's and Myers' five categories of high-level human resources."[10]

First are the *entrepreneurial, managerial, and administrative personnel* required for organization. Private firms, public enterprises, government agencies, educational institutions, and the like all require specialists as well as administrators. Second are *professionals of all kinds*, such as scientists, engineers, physicians, agriculturalists, etc. Because of their critical importance, *qualified teachers* constitute a third category. Too often teachers lack the necessary qualifications to provide students with the most effective learning experience, both in developing and developed countries. Fourth are various *subprofessionals and technicians*. Engineers must be backed by technicians, physicians by nurses, administrators by clerical personnel, etc. In developing nations, the effective and efficient operation of an office is often hindered not by the lack of competent administrators, but by the paucity or absense of skilled typists or stenographers. Finally, a fifth category, which is more difficult to define, includes *political leaders, labor leaders, judges, police officers, and officers of armed forces*.

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[10] Frederick Harbison and Charles A. Myers, *Education, Manpower and Economic Growth: Strategies of Human Resource Development*, McGraw-Hill Book Company; New York, 1964.

This classification and other factors emphasize the need for broader concepts of human resources and education.

An Alternative Approach to Comparative International Measurement: An Index of Human Resource Development for 75 Countries, Divided in Four Levels

Harbison and Myers have developed a "Composite Index of Human Resource Development."[11] Although such an index should encompass a wide range of factors, the lack of adequate data restricted implementation to educational statistics only.

Table III ranks 75 representative countries by the composite index. The index is based on UNESCO enrollment data. Enrollment ratios were calculated for both the second and third (higher) educational levels. The second level enrollment ratios were the percentage of the numbers enrolled in the age group 15-19, adjusted for years of schooling. The age group 20-24 served as the basis for the calculation of the third or higher educational level. The higher education enrollment ratios were multiplied by a constant adjustment factor of five to afford proper weight to this category. The simple algebraic sum of these two ratios represents the index values. The ranked index values were then divided into four categories or levels. Level I includes all those countries beginning with Niger (0.3) up through Sudan (7.6). All of the countries from Guatemala (10.7) through Iraq (31.2) are included in Level II of the classification. Level III is bounded by Mexico (33.0) and Norway (73.8). Finally, Level IV proceeds from Denmark (77.1) through the United States (261.3). Levels I through IV are labeled, for convenience, "underdeveloped," "partially developed," "semi-advanced," and "advanced," respectively, with regard to human resource development.

Table IV indicates some of the differences among the various levels of human resource development with respect to certain important economic growth indicators. The arithmetic means of per capita GNP in U. S. dollars for countries in Levels I-IV are 84, 182, 380, and 1100, respectively. Level I countries have the highest proportions of their populations in agriculture, while those of Level IV have the least. In contemporary United States, for example, only approximately 8 percent of the labor force is engaged in agricultural pursuits.

UNESCO data show that countries at the higher levels have greater numbers of teachers, scientists and engineers, and physicians and dentists per 10,000 population than do those at the lower levels. Clearly, these types of personnel are representative of high-level human resources for development. Teachers are obviously integral to the development of the educational system, scientists and engineers for industrial development, and the like.

The data of Table IV generally reveal the relative advantage of the higher-level countries with respect to the remaining factors also. It is particularly interesting that, although the Level IV countries display the highest mean percentage of expenditures on education in relation to the national income, the Level I countries are also channeling a relatively high percentage of their already too low national income into education. This means expenditure of 3.7 percent by Level I countries is the second largest figure and has important strategy implications.

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[11] *Ibid.*

The mean percentages in the age group 5-14 years are also strategically relevant, for they reflect the expenditures required to achieve universal primary education so often the avowed goal of developing nations. The lower mean percentage of the Level IV countries suggests that the wealthier countries have the fewest to educate.

Table V ranks 75 representative countries by GNP per capita in U. S. dollars with level of human resource development. The data reflect a definitive correlation between these variables of approximately .89.

Nevertheless, there are some notable exceptions. In the Level IV countries, for example, Japan exhibits a considerably higher index of human resource value than is consistent with its GNP per capita. The Japanese deviation is at least partially explicable by its early and continued heavy investment in education. Beginning with the Meiji Restoration, the planners decided to develop not only a system of quality primary education, but also technical and higher-level secondary and university education. The modernization of Japan, a most remarkable achievement for what was a basically feudal-agrarian society scarcely 100 years ago, was undoubtedly largely facilitated by the early and continuous investment in training and education. Taiwan, South Korea, Yugoslavia, and the Soviet Union are illustrative of other nations with remarkable investments in education. Thus, although many countries have yet to reap the GNP per capita consistent with educational investment, such investment may be thought of as planning for future economic growth, provided, of course, the plans are consistent with other economic development policies.

Conclusion: Limitations of the Composite Index and the Need for Better Data

It is important to emphasize the need for further efforts to develop better measures of human resource development. The Composite Index is admittedly very crude, and its deficiencies are primarily due to the paucity of adequate data. For example, educational attainment data would be more appropriate than enrollment ratios for indicating how many individuals have completed primary, secondary, and third-level education. In addition to data on educational attainment, information on the numbers of people in formal and informal training programs would also be extremely valuable. Finally, there is a need for occupational distribution data, wages, etc. This kind of information is invaluable for providing clues as to the consistency or inconsistency which obtains between the system of financial incentives on the one hand and the relative status of people on the other. As these kinds of data become more numerous and more readily available, we will be in a better position to measure the many dimensions of the concept of "human resource development."

Table III. RANK ORDER OF 75 REPRESENTATIVE COUNTRIES BY COMPOSITE INDEX OF HUMAN RESOURCE DEVELOPMENT[12]

Level I.	0.3	Niger
	0.75	Ethiopia
	1.2	Nyasaland
	1.55	Somalia
	1.9	Afghanistan
	1.9	Saudi Arabia
	2.2	Tanganyika
	2.6	Ivory Coast
	2.95	Northern Rhodesia
	3.55	Congo
	4.1	Liberia
	4.75	Kenya
	4.95	Nigeria
	5.3	Haiti
	5.45	Senegal
	5.45	Uganda
	7.55	Sudan
Level II.	10.7	Guatemala
	10.7	Indonesia
	10.85	Libya
	14.2	Burma
	14.5	Dominican Republic
	14.8	Bolivia
	15.25	Tunisia
	17.3	Iran
	19.5	China (Mainland)
	20.9	Brazil
	22.6	Colombia
	22.7	Paraguay
	23.15	Ghana
	23.65	Malaya
	24.3	Lebanon
	24.4	Ecuador
	25.2	Pakistan
	26.8	Jamaica
	27.2	Turkey
	30.2	Peru
	31.2	Iraq
Level III.	33.0	Mexico
	35.1	Thailand
	35.2	India
	35.5	Cuba
	39.6	Spain
	40.0	South Africa
	40.1	Egypt
	40.8	Portugal
	47.3	Costa Rica
	47.7	Venezuela
	48.5	Greece
	51.2	Chile
	53.9	Hungary
	53.9	Taiwan
	55.0	South Korea
	56.8	Italy
	60.3	Yugoslavia
	66.5	Poland
	68.9	Czechoslovakia
	69.8	Uruguay
	73.8	Norway
Level IV.	77.1	Denmark
	79.2	Sweden
	82.0	Argentina
	84.9	Israel
	85.8	West Germany
	88.7	Finland
	92.9	U. S. S. R.
	101.6	Canada
	107.8	France
	111.4	Japan
	121.6	United Kingdom
	123.6	Belgium
	133.7	Netherlands
	137.7	Australia
	147.3	New Zealand
	261.3	United States

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[12] Reproduced from Chapter 3 of Education, Manpower, and Economic Growth: Strategies of Human Resource Development, by Frederick Harbison and Charles A. Myers, published by McGraw-Hill Book Company, Inc., New York, January 2, 1964. Composite of (1) enrollment at second level of education by four levels of human resource development as a percentage of age group 15-19 (adjusted for length of schooling) and (2) enrollment at third level (higher) education as a percentage of the age group 20-24, multiplied by a weight of 5. Both for latest year available, from special tabulations furnished by UNESCO, collected for but not published as such in Basic Facts and Figures, 1961, Paris, 1962. We have made a few further adjustments to reduce duration of second level education to no more than seven years.

Table IV. INDICATORS OF HUMAN RESOURCE DEVELOPMENT AND ECONOMIC GROWTH: ARITHMETIC MEANS BY LEVELS OF HUMAN RESOURCE DEVELOPMENT[13] (rounded to nearest digit)

Indicator	Level I 17 Countries	Level II 21 Countries	Level III 21 Countries	Level IV 16 Countries
Composite index (second and higher education)	3	21	50	115
GNP per capita, U.S. dollars	$84	$182	$380	$1100
Percent active population in agriculture	83	65	52	23
Teachers (first and second levels) per 10,000 population	17	38	53	80
Scientists and engineers per 10,000 population	0.6	3	25	42
Physicians and dentists per 10,000 population	0.5	3	8	15
First level enrollment ratio (unadjusted)	22	42	62	73
First and second level enrollment (adjusted)	20	45	66	89
Second level enrollment ratio (adjusted)	2.7	12	27	59
Third level enrollment ratio (unadjusted)	0.15	1.6	5	11
Percent enrolled in scientific and technical faculties	24	28	26	28
Percent enrolled in humanities, fine arts, and law faculties	34	39	33	32
Public expenditures on education as percent of national income	3.7	2.1	3.1	4.2
Percent in age group, 5-14 included	24	24	22	18

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[13] Sources in addition to special UNESCO tabulations: Basic Facts and Figures, 1961, UNESCO, Paris, 1962; Norton Ginsburg (editor), Atlas of Economic Development, Chicago, Center for International Studies, MIT, November 1959.

Table V. RANK ORDER OF 75 COUNTRIES BY PER CAPITA GROSS NATIONAL PRODUCT (IN U. S. DOLLARS) WITH LEVEL OF HUMAN RESOURCE DEVELOPMENT[14]

Ivory Coast	na	I	Portugal	$ 224	III
Niger	na	I	Dominican Republic	239	II
Senegal	na	I	Mexico	262	III
Afghanistan	$ 50	I	Colombia	263	II
Somalia	50	I	Yugoslavia	265	III
Ethiopia	55	I	Brazil	293	II
Burma	57	II	Spain	293	III
Libya	60	II	Japan	306	IV
Nyasaland	60	I	Jamaica	316	II
Sudan	60	I	Greece	340	III
Tanganyika	61	I	Malaya	356	II
Uganda	64	I	Costa Rica	357	III
Pakistan	70	II	Lebanon	362	II
China (Mainland)	72	II	Chile	379	III
India	73	II	South Africa	395	III
Nigeria	78	I	Cuba	431	III
Kenya	87	I	Poland	475	III
Congo	92	I	Uruguay	478	III
Thailand	96	III	Argentina	490	IV
Bolivia	99	II	Hungary	490	III
Liberia	100	I	Italy	516	III
Haiti	105	I	U. S. S. R.	600	IV
Iran	108	II	Venezuela	648	III
Paraguay	114	II	Czechoslovakia	680	III
Indonesia	131	II	Israel	726	IV
Egypt	142	III	Finland	794	IV
South Korea	144	III	Netherlands	836	IV
Northern Rhodesia	150	I	West Germany	927	IV
Iraq	156	II	France	943	IV
Taiwan	161	III	Denmark	1057	IV
Saudi Arabia	170	I	Norway	1130	III
Ghana	172	II	United Kingdom	1189	IV
Tunisia	173	II	Belgium	1195	IV
Peru	179	II	New Zealand	1310	IV
Ecuador	189	II	Australia	1316	IV
Guatemala	189	II	Sweden	1380	IV
Turkey	220	II	Canada	1947	IV
			United States	2577	IV

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[14] Reproduced from Chapter 3 of Education, Manpower, and Economic Growth: Strategies of Human Resource Development, by Frederick Harbison and Charles A. Myers, published by McGraw-Hill Book Company, Inc., New York, January 2, 1964.

PART II

Population and Employment Policies and Measures

32/33

POPULATION, MIGRATION, AND RELATED EMPLOYMENT PROBLEMS

Philip M. Hauser

World Population Perspectives

Man has inhabited the earth for over 2 1/2 million years. During the Neolithic Period, 10,000 years ago, total world population was probably 10 million. World population when the Christian era began is estimated at 250 million to 300 million. Around 1650, the world's population is believed to have been about 500 million. At present, total world population is placed at approximately 3.3 billion.

It is clear there has been an amazing acceleration in the rate of total population growth during the last three centuries of the modern era. The world population growth rate has increased from .4 percent per year in 1650 to 1 percent per year in the period between the two world wars of the twentieth century. At present, the growth rate is 2 percent per annum.

A 2 percent per year increase is incredibly rapid. At the present rate of growth, it would take as few as 12 people a mere 976 years to produce a population of 3 billion. At the same rate of growth, with the present population, in 650 years there will be one person for every square foot of land surface on the globe. Fifteen and one-half centuries into the future, the mass of population would match the mass of the earth itself. Such demographic arithmetic leads to two very striking conclusions. First, the present rate of population growth could not have persisted for any great length of time in the past. Second, it cannot possibly persist for very long into the future.

The earth has a surface area of approximately 200 million square miles, but only 50 million square miles is land surface. A tenth of the land surface is arable, and another tenth might become arable with able investment and technology. Thus, any rate of population increase must in the long run reach a point of saturation. In the long run a zero rate of population growth must be achieved.

Causes of Rate of Population Increase

What are the causes for the present rate of population increase or "population explosion?" The primary cause is that man has achieved remarkable control over mortality. The death rate in Europe in the middle of the seventeenth century was 40 deaths per 1,000 persons per year. The present death rates in Europe are less than 10 per thousand persons per year.

Three major factors contribute to this marked decrease in mortality. First, technological advances and increased productivity raised the level of living. Contributing was the development of relatively stable central governments permitting longer and longer periods of relative peace and tranquility.

The second major factor is more effective means of sanitation and improvement of personal hygiene, contributing significantly to elimination of parasitic and infectious diseases.

The third major factor is modern medicine, a rather recent phenomenon, brought to a climax after World War II with the development of antibiotics and pesticides. In 1850, one-fourth of all children born were dead by the age of 10, and one-half were dead by the age of 45. A century later, one-fourth of all children born were not dead until age 60, and one-half were not dead until age 70.

Let us consider some of the more immediate consequences of the increased growth rate. The total population of the world as of 1965 was 3.3 billion. If the fertility rate remains constant and the death rate continues to decline, the world population in the year 2000 will be 7.5 billion. On the basis of assumptions of varying degrees of fertility reduction, the United Nations estimates that world population in 2000 will achieve a maximum of 7.3 billion, a median of 6.1 billion, or a minimum of 5.4 billion. It is my opinion that these figures are much too optimistic in view of the little accomplished in fertility reduction to date. A median of 7 billion seems realistic.

Table I illustrates the manner in which population growth to 7 billion by 2000 A.D. will be divided between advanced and developing countries:

Table I. POPULATION (in billions)

	1965	2000	Increase
Advanced Countries	1.1	1.6	.5
Developing Countries	2.2	5.4	3.2
	3.3	7.0	3.7

The developed countries would increase from 1.1 billion to 1.6 billion, while the less-developed countries would increase from 2.2 billion to 5.4 billion over the 35 year period. Obviously, then, both proportionally and in terms of raw numbers, the bulk of the population explosion must be borne by those countries which are presently least able to support their populations.

Significance of Population Explosion

The following adequately summarizes what is meant by "population explosion." It took from the beginning of man's existence until 1825, over two million years, for the population of the world to attain a level of one billion inhabitants. One hundred and five years later, in 1930, a level of two billion was achieved, and only 30 more years were required for the population to reach the three billion level of 1960. Even if birth rates decrease, it will take the population only 17 years to increase to four billion; 10 years after that to reach five billion; and only eight more years after that to reach a level of six billion. This is "population explosion."

Another very significant aspect is the great speed with which the death rate has dropped in the developing countries. In the economically advanced countries, the decline of the death rate was gradual, taking the greater part of three centuries. During this same time, other phenomena such as the industrial revolution, the agricultural revolution, the scientific revolution, paved the way for a concomitant rise in ability to meet the needs of an expanding population. In addition, since the end of the nineteenth century, the birth rate has gradually decreased, thus lowering the rate of population growth.

In the developing countries, however, the means for lowering mortality are already developed and need only be implemented to achieve mortality levels approaching those of the economically advanced nations. Since World War II, death control has been experienced by the less developed countries of the world in mass. However, in most cases, mortality reductions have not been accompanied by significant economic development and corresponding decreases in levels of fertility.

Probably the most important problem facing the world today is to achieve higher levels of living for all people who have not yet achieved it. This is a basic principle of the United Nations as well as a fundamental objective of all national governments. Unfortunately, however, the explosive rates of population growth, especially in the developing regions of Asia, Africa, and Latin America, obstruct efforts to achieve economic development as measured by higher income per capita.

Population and Economic Development

The basic relationship between population growth and economic development is demonstrated by this very simple equation:

$$L = \frac{O}{P}$$

L is the level of living, measured by income per capita, or the GNP; O is aggregate output; and P is population. To increase income per capita, aggregate output must increase more rapidly than population. For example, if the aggregate output of a country increases by 10 percent over a five-year period, and over this same five-year period the population also increases by 10 percent, there is no rise in the overall level of living, but merely more people living at the same level. In general, then, the smaller the denominator, P, relative to the numerator, O, the higher will be the per capita income.

1. High Growth Rate

Population factors operate more specifically to obstruct economic development in five basic ways. The first is through excessively high growth rates. We have already alluded to how the growth rate affects the level at which a population exists. It may sound like a reasonable assumption that as long as the density of a given country is not high, as long as there is plenty of available land, population growth is not a problem. From the standpoint of economic development, however, very low density of a population is irrelevant to the relationship between rate of population growth and rate of economic development. It does not matter whether the growth rate is 1 percent or 4 percent. If it cannot be exceeded by the rates at which technology is developed, capital is accumulated, skilled labor can be trained, etc., economic development cannot be achieved, and the level of living cannot be raised. If population growth cannot be slowed down through reductions in the birth rate, economic development is very difficult, if not impossible to achieve.

2. Age Structure

A second population factor is the age structure. Generally, any country with a birth rate of 40 per thousand per year (a level common to most of the developing countries) will have a population in which 40 percent of the people are under the age of 15. Thus, if we take 15 as an arbitrary cutting point, 40 percent of the population is seen to be below working age. This is very important because, generally, the greater the proportion of people below working force age, the smaller the per capita income.

Another unfavorable aspect of a "young" age structure is that a very large proportion of a country's financial resources must be used for merely rearing the next generation. Thus, much less capital is available for investment in economic growth.

A final detrimental aspect--in general, the larger the proportion of young people in a given country, the smaller the amount of money available per child for education and the transmission of skills. The larger the proportion of young, the less it is possible to increase investment per child, as well as overall investment in human resources at a high enough level to be critical in the sense of making an impact on economic development.

3. Population Distribution

A third major factor which may hinder economic development is population distribution. The present discussion will be confined to one particular kind of distribution, urban-rural. Mankind probably did not achieve permanent human settlement until as recently as the Neolithic Period, about 10,000 years ago. Neolithic villages rarely exceeded 50 to 100 households.

The size an urban area can reach depends on the state of technological development and the state of social and organizational development. Mankind did not achieve a combination of social and technological development to permit cities of 100,000 or more until as recently as the Greek or Roman civilizations. Further, not until 1800 did social and technological developments permit the proliferation of cities of a million or more.

In the presently economically advanced areas, urbanization was both an antecedent and consequence of increased productivity and higher levels of living. Adam Smith pointed out that the higher the level of technological development, the greater the possible division of labor. Increasing specialization, in turn, stimulates economic development. Add to these,considerations of external economies, minimization of friction, communication, etc., and we have urban concentrations which have become the most efficient producing and consuming units that mankind has yet devised.

In the developing regions, however, this is not necessarily the case. We often find large urban conglomerations which are not efficient producing and consuming units. One cause is their colonial heritage. Many of the large cities in the developing regions of Asia, Africa, and Latin America did not achieve their great size because of indigenous economic development but because they serve as liaisons between undeveloped and economically advanced countries. Furthermore, the tremendous growth of these cities is not due to a "pull" of the rural population because of greater opportunities in the cities but the result of "push" out of the rural areas due to lack of opportunities there.

With World War II and post-war developments, the collapse of the imperialist system left many less-developed nations with large-scale internal unrest, resulting in the generation of extensive refugee populations. They left the land to seek the security of large cities, a fact which contributed significantly to an overall lowering of production and levels of living.

The net effect is that the populations of many developing regions may be considered "over-urbanized." The use of the term "over-urbanization" is not a value judgment but rather that, in many of the developing regions, the number of people in the cities relative to the number of people in the nonagricultural labor force is much greater than was the case for the presently-advanced countries at a comparable level of urbanization. This means that the urban areas are disproportionally large, and rather than furthering economic development, they often do quite the reverse.

In the advanced countries, a sharp increase in agricultural productivity preceded and made possible large accumulations of capital for industrial development. This fact has been ignored in many areas anxious for the more or less spontaneous development of industrialization. The "over-urbanization" of developing regions has quite often prevented this process from occurring. With the emphasis on investment in industry, there has been a tendency to ignore investing in rural areas.

To the extent that high birth rates contribute to maldistribution ("over-urbanization") of the population, the city, instead of stimulating economic development, may actually act as a parasite, draining the rural segment of the nation to the point that economic development is significantly retarded.

4. Quality of the Population

A fourth factor in which population growth may obstruct economic development is the quality of the population. The word quality is not being employed in the biological or genetic sense which found expression in absurd racist doctrines of a generation ago. If there is one thing the social sciences have contributed to human knowledge, it is that there is nothing the members of one race can do that the members of all races cannot do; the differences in what human beings are able to do is predominantly a function of differential opportunity for the attainment of education and skills.

It is impossible to attain higher levels of living through economic development with a population that is characterized by high levels of illiteracy, ignorance, and the general absence of skills. But if the population is increasing so rapidly that it is impossible for a country to provide educational and training facilities for larger and larger numbers of people, efforts at economic development will become hopelessly bogged down.

5. Population Density

A fifth population factor is density. In Brazil, for example, vast unoccupied areas of land make it possible in the long run for Brazil to support a much larger population. In contrast, the Netherlands already has a very dense population accompanied by the relative absence of additional available land. This may also be true in India, although there exist substantial land areas that are uninhabited but largely not arable. Despite the variations that may exist, however, no country can afford to neglect the importance of density; because in the long run, the ratio of population to resources will determine the level at which people are able to exist.

FERTILITY AND ECONOMIC DEVELOPMENT

Philip M. Hauser

Population Growth

A nation can ignore the population factors of growth, age structure, distribution, quality, and density only at great peril. Some demographic models demonstrate the gains that can be achieved through population control and the difference that such control can make from the standpoint of manpower policy and development.

Ansley J. Coale of Princeton University has developed a comparative model of population growth. A major aspect is summarized in Table II.[1]

Table II. ILLUSTRATIVE PROJECTION OF THE POPULATION OF A DEVELOPING AREA (population in thousands)

Time in years	0	30	50	150
Projection A	1,000	2,757	5,736	245,500
Projection B	1,000	2,053	2,950	10,477

Projection A--Fertility continues unchanged
Projection B--Fertility falls linearly by 50 percent in 25 years and thereafter remains unchanged
Initial population--1 million persons Birth rate--44 per thousand per year
Life expectancy at birth--53 years Death rate--14 per thousand per year
Growth rate--30 per thousand per year (3 percent per year)

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[1] The material is based primarily upon Ansley J. Coale, "Population and Economic Development," in Philip M. Hauser, editor, The Population Dilemma, Prentice-Hall, Englewood Cliffs, New Jersey, 1965.

The birth, death, and growth rates used in the model are generally applicable to most of the present developing countries, and, therefore, the model can indicate what is likely to happen in such countries under the conditions stated. Coale projects the population level over a span of years. First of all, assuming no change in the birth rate, Projection A, an initial population of one million will have reached a level of 2,757,000 at the end of 30 years. In 50 years, the population will have reached a level of 5,736,000; and in 150 years, 245 million. That is, under the conditions stated in the model, in 150 years, this little nation of one million could attain a population level that presently would make it the third largest nation of the world.

Projection B, which is made on the assumption that the birth rate will decrease by 50 percent in the next 25 years and then remain constant, offers a very significant contrast. Here an initial population of one million will reach a level of 2,053,000 in 30 years; 2,950,000 in 50 years; and 10,477,000 in 150 years.

The unchecked population growth of Projection A presents real problems to any country regardless of the present density figures. Even in areas such as Panama and Brazil, it takes very little time to run out of space with this kind of population growth.

One problem not even mentioned as yet is food supply. The projections made by the United Nations and the Food and Agricultural Organization during the 1950's made it perfectly clear that the world population by the year 2000 could not possibly be adequately fed. It would be impossible to increase food intake, a fact which might pose serious problems in view of the revolution of rising expectations which has swept the world since the end of World War II. This is the first period in all of human history in which no nation is willing to settle for second place in its level of living, or which does not insist on independence and freedom. The issue of food alone might still contribute to considerable unrest and political instability before the end of the century.

But World War II destroyed a good part of the world's food production capacity. After the war, food production per capita was lower than before the war, and it took a long time for it to be restored to pre-war levels. Since 1960, something quite new and sinister has entered the picture. In Latin America, which is experiencing a growth rate of 3 percent per year, doubling every 23 years, food production per capita during the first four years of the 1960's decreased by 6 percent. Per capita food production in Asia during these same four years decreased by 4 percent. The ECAFE report on the economic situation in Asia and the Far East for 1966 showed that food production per capita went down by 4 to 5 percent.

In addition, many nations are not increasing their food production fast enough to keep up with the rate at which their population is growing. This would add to the number of nations which, by 1975, might be facing widespread famine and starvation.

In Northern America, on the other hand, the United States and Canada have experienced prodigious food production. These countries have transported wheat and other foodstuffs in large quantities to areas which have been on the verge of famine. However, the sad fact is that, at present, the food reserves of the United States and Canada are about exhausted.

In reaction, it is often suggested that new means of producing food will relieve future shortages. The chemical industry, for example, would convince us that food can be synthesized. Here, however, we have the familiar problem of leading a horse to water but not being able to force him to drink.

What people eat is a function of their culture. To those of us who are not Hindus and do not live in India, it may seem incomprehensible that over 200 million head of cattle not only contribute virtually nothing to the Indian economy, but compete with India's almost 500 million people for scarce food supplies. However, in terms of the fundamental value system of these people, it could not be otherwise.

It is also true that people eat as food what their culture defines as edible. In some parts of the world, Europeans and Northern Americans have starved to death in the presence of things that could have been eaten but which their cultures did not define as "food." The Chinese have starved to death in the presence of cow's milk, a fundamental part of the Northern American's diet but which the Chinese define as unfit for human consumption. Thus, it is one thing to rise smugly above other peoples' value systems, yet quite another thing to face the fact that, although food may be synthesized, human beings must be convinced they should eat it. This is just one of the tragic aspects of population growth which fertility control must somehow play a role in alleviating. Let us now turn to some other gains which can be made through fertility limitation.

Now let us consider an unfavorable age structure in view of Coale's comparative projections as shown in Table III.[2]

TABLE III. AGE STRUCTURE

Percent of Population 0 to 14 Years of Age

Time in Years	0	30	50	150
Projection A	43.0	45.8	46.3	45.2
Projection B	43.0	32.8	30.6	28.8

Given the assumptions of Projection A in Table III with no change in level of fertility in 30 years, the percentage of people under the age of 15 rises slightly to 45.8 percent, because of decrease in the level of mortality. In 50 years, it is 46.3 percent; and in 150 years, as the age structure stabilizes, it declines to about 45.2 percent. Thus, without a decrease in the birth rate, there continues to be a very large proportion of the population in the dependent age group of 0 to 14 years, and as emphasized earlier, the larger the proportion of young, the lower the income per capita.

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[2] Ibid.

In contrast, Projection B, assuming a 50 percent birth rate decrease in 25 years, paints quite a different picture. In just 30 years, the percent of individuals in this category drops from 43.0 to 32.8 percent; in 50 years, it is down to 30.6 percent; and in 150 years, it is down to about 28.8 percent, which is the present level of the United States. This means that every person of labor force age comes to have a much smaller burden of dependency, and his earnings allow a greatly increased investment per child for education, attainment of skills, consumption, etc.

Conversely, it is also instructive to consider these comparative projections in terms of labor force growth rates, as shown in Table IV.[3]

Table IV. LABOR FORCE GROWTH RATES

Percent of Population 15 to 64 Years of Age

Time in Years	0	30	50	150
Projection A	53.4	51.0	50.8	49.4
Projection B	53.4	62.7	63.2	63.1

Without a reduction in the birth rate, the percentage of people in the productive age group decreases slightly. However, given the fertility decrease assumed in Projection B, within the first generation, 30 years, there is a sharp increase in the percentage of individuals in the productive category. At the same time, there is the concomitant decrease in the percentage of people in the dependent age group (Table III).

As Coale points out, the joint realization of a decreased number of dependents and an increased number of workers leads to an appreciable gain in the income per capita during the first 30 years of fertility reduction.

In the longer run, the labor force growth rate slows down as a consequence of the decrease in the total population growth rate. This, in turn, makes it easier to increase the investment behind each worker, with the logical result of raising both individual and overall productivity.

Consider agriculture in the United States. In 1910, each farmer in the United States was able to grow enough food to feed himself and six other people. In 1960, each farmer was able to grow enough food to feed himself and 28 other people. The big difference can be attributed to the increase in the amount of capital investment behind each farmer. In American industry as a whole, there is presently an average of $30,000 in training, technology, and machinery invested in every worker.

Consider the effect of the fertility reductions projected in Projection B on income per capita as shown in Table V.[4] With an index of 100 to represent income per capita at the beginning, significant gains can be demonstrated.

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[3] Ibid.

[4] Ibid.

Table V. INCOME PER ADULT CONSUMER GIVEN REDUCED FERTILITY

Units of Income Per Adult Consumer

Time in Years	0	30	50	150
Projection B	100	141	186	596

Under the conditions of Projection A, continued fertility rate, it is here assumed that the adult consumer index would remain at a level of 100. However, under the assumption of reduced fertility in Projection B, after 30 years income per adult consumer rises to 141; after 50 years, to 186; and after 150 years, to 596. This means that if the fertility rate is reduced by 50 percent in 25 years, within one generation income per capita may be increased by 41 percent. This is not meant to suggest that such economic gains will automatically follow the reduction of the birth rate. Obviously, a whole series of concomitant gains have to be made. Nonetheless, "all other things being equal," the reduction of fertility is certainly a key factor in economic development.

Another significant aspect to deal with is the percentage of the labor force involved in agriculture. Table VI gives the average annual percentage increase in nonagricultural employment that would be required if all of the increased labor force is to be employed outside of agriculture.[5]

Table VI. AVERAGE ANNUAL PERCENT INCREASE IN NON-AGRICULTURAL EMPLOYMENT REQUIRED IF ALL OF THE INCREASED LABOR FORCE IS TO BE EMPLOYED OUTSIDE AGRICULTURE

Required Annual Percent Increase in Employment

Percent in Agriculture at Present Time	Project.	0-10 Years	10-20 Years	20-30 Years	30-40 Years	40-50 Years	50-60 Years
70	A	7.3	5.9	5.1	4.6	4.4	4.2
	B	7.3	5.7	4.0	2.7	2.2	1.9
60	A	6.2	5.3	4.8	4.4	4.3	4.1
	B	6.2	5.1	3.8	2.6	2.1	1.8
50	A	5.3	4.8	4.5	4.3	4.2	4.0
	B	5.3	4.7	3.5	2.5	2.0	1.8

Within 10 to 20 years, a smaller rate of increase in nonagricultural employment is necessary to absorb the entire labor force growth in industry in both Projections A and B. Even at this stage, there is slightly less strain under conditions of reduced fertility. As time goes on, the strain on the economy to produce nonagricultural employment greatly diminishes under conditions of reduced fertility. This means more and more ability to invest manpower resources in the development of industry.

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[5] *Ibid.*

The key, again, is the reduced birth rate. Approximately 20 to 30 years after the birth rate begins to decline, there is a consequential decrease in the growth rate of the labor force. It becomes easier to accumulate capital stock and to increase the capital stock invested behind each worker. The result is increased productivity per worker and the freeing of a larger and larger proportion of the labor force for participation in nonagricultural employment.

To examine the effect of fertility on levels of male participation in the labor force, the gross reproduction rate, GRR, can be defined as the number of female births per woman during her complete childbearing cycle. Table VII shows the joint effect of the GRR and the death rate (as indicated by the level of life expectancy) on the level of male participation in the labor force (as indicated by the number of males active in the labor force per 1000 population).

Table VII. LABOR FORCE PARTICIPATION RATES (ACTIVE MALES/1000 POPULATION)[6]

	Life Expectancy at Birth (e^o)		
GRR	30	50	70
4.0	255	240	226
3.0	286	271	257
2.0	328	315	301
1.0	392	382	369

With a high rate of gross reproduction, 4.0, and a life expectancy at birth of 30 years, indicating a high death rate, there are approximately 255 males involved in the labor force per 1000 individuals in the population. As the death rate goes down (the life expectancy goes up), the number of active males per thousand decreases and income per capita also decreases.

Conversely, if life expectancy remains the same while the GRR is being reduced, there is a considerable increase in male participation in the labor force. For example, with a GRR of 4.0 and a life expectancy of 50, the male participation in the labor force is 240. However, by reducing the GRR at this same level of life expectancy, male participation increases to 271, with a GRR of 3.0; to 315, with a GRR of 2.0; and to 382, with a GRR of 1.0.

Finally, if birth and death rates are reduced simultaneously, there is still a considerable gain in male participation in the labor force. Moving diagonally on Table VII, for instance, with a GRR of 4.0 and a life expectancy of 30, male participation is 255. By increasing life expectancy to 50 and reducing the GRR to 3.0, the male participation index advances to 271. Likewise, by further increasing life expectancy to 70, and further reducing the GRR to 2.0, there is an additional rise in male labor force participation to a level of 301.

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[6] Table VII and related materials are on Aging of the Population and Its Economic and Social Implications, United Nations, English and French, ST/SOA/SERIES A/29, 1961.

Similar statements can be made about the joint effect of birth and death rates on burden on workers and on human resource investment. First of all, if the birth rate remains the same and the death rate decreases, there is an increase in the burden on each worker to meet his basic needs. However, by decreasing the birth rate at the same time that mortality is declining, the burden on workers is significantly reduced.

Secondly, with regard to human resource investment, the same basic relationships obtain. A decline in mortality without a concomitant decline in fertility will result in a decrease in the amount of per capita investment available for education and the transmission of skills. However, decreasing the birth rate, at any level of mortality, will result in a significant increase in the capital invested in each member of the labor force.

Conclusions

In my earlier lecture, five ways in which population factors impede economic growth were considered. Each of these problems finds at least a partial solution in the reduction of levels of fertility:

A decrease in birth rate

1. decreases the rate of population growth, thus making possible an increase in per capita income;

2. automatically eliminates an unfavorable age structure;

3. makes it possible to increase the quality of the population through increased investment per capita in education and training;

4. will effect a better balance in rural-urban population distribution; and

5. is the only reasonable means of avoiding eventual population densities which would ultimately diminish levels of living all over the world.

HUMAN RESOURCES IN AGRICULTURE AND RURAL DEVELOPMENT: THE OVERALL POPULATION-FOOD PICTURE

Arthur F. Raper

In considering human resources in agriculture and rural development, it is necessary to get an overall picture of the world's population-food situation. There are great but shrinking surpluses of food in certain western countries, while deficits exist in a great many other countries. As Paul G. Hoffman says in "The Rich and the Poor," in the Saturday Review for September 17, 1966, the gap between the wealthy and the underdeveloped nations is widening, as the proportion of the gross national product devoted to foreign aid is shrinking. This means that the areas which contain the greatest amount of food and the ability to produce it are becoming more effective, while the areas which have the least food-producing potential are becoming less effective.

Thus, in Latin America between 1939 and 1966, there was a decrease per capita of food of 5.7 percent; in Africa during those 17 years, there was a decrease of 4.0 percent per capita; in the Far East, a decrease of 2.8 percent; and in Oceania, a decrease of about 1.0 percent. Against this, there was an increase per capita of food produced in North America of 18.2 percent; in Western Europe, of 21 percent; in Eastern Europe and Russia, of 33.9 percent; and in the Near East, of 7.9 percent.

Technological Imbalance

The tremendous challenge, for both the less-developed countries and the more highly-developed countries, is to determine how the countries which have the resources, organization, and know-how can best assist the areas in which they are needed most. The uneven application of technology accounts for the present situation. Technology has naturally been applied first in the field of health; it is relatively easy to inoculate people against typhoid, cholera, yellow fever, etc. The technology of saving life operates rather immediately, as evidenced by the decrease in the death rate. At the same time, the birth rate does not decrease proportionally. In fact, the rate of population growth is likely to increase as more people remain alive through their reproductive years. The result is a decrease in per capita food production. This technological imbalance can be explained in terms of the resource base, the uneven application of science, and the role of cultural patterns.

Some areas have a much larger resource base than others. However, no one can be quite sure at this point where the most valuable resources are. Resources that were not even identified a half century ago are now basic to the modern technological era. In addition, modern means of locating and processing these resources have greatly increased their potential availability.

The uneven application of science deserves considerable attention. The areas with the least food per capita are the areas with the greatest population increase. The imbalance is becoming greater as time passes. In addition to the universal desire to extend life, there are other desires just about as universal but not as well recognized, such as the near universal desire of people for the approbation of their associates.

Role of Defense Departments

This leads into the whole area of training, beginning with a basic education for all. Programs can be developed so the people will have the opportunity to acquire skill in the areas in which they are most interested.

Such steps as these are necessary to overcome the technological imbalance, but they require a tremendous amount of planning and commitment. However, we need not be too pessimistic. Much technological development has come about as the result of human inadvertencies. For example, when various national defense departments terminated armament contracts due to the obsolescence of weaponry, the tools involved had capabilities for production of facilities for the home front. The first large electric generators, for instance, were made for battleships and later applied to domestic use.

Military concerns have been the first to benefit from modern technological advances, while domestic application of these advances has followed inadvertently. The reasons are largely financial. At present, the United States is spending $70 billion, over half of the total Federal budget, on defense. With resources of this kind, scientists, inventors, and resources are available to accomplish almost unlimited objectives.

The less-developed nations are also pushing rather markedly in this direction. After the maintenance of sovereignty is arranged for, resources are available for the development of desired social and economic programs.

Thus, at least for the foreseeable future, a larger and larger proportion of mankind's financial resources will be directed to the matter of armament. However, there is another very interesting aspect. Given that such things as refrigerators, air conditioners, etc. do spill over into the domestic market, people are going to try them and accept them. Once this has happened, people are going to see to it that they continue to have those things. The continued availability of such items becomes a matter of politics and public administration. The trend is toward equalization of resources, food, and otherwise.

Role of International Big Business

Another example of technological inadvertencies flows from the development of big international business. Many large American corporations have established branches in the less-developed countries. At first, their facilities are operated by American personnel. However, it usually becomes politically wise to replace the Americans with natives. This gives a real boost to the country's economy. Thus, the intention to increase the profits of a given corporation has the inadvertent effect of aiding a country's economic development.

A final factor in this technological imbalance is the role of cultural patterns. Some believe it is impossible to introduce modern technology into an underdeveloped country because the people are so committed to traditional ways that they simply will not try anything new. This issue will be discussed in the second lecture on the Comilla program in East Pakistan.

Four Projects to Alleviate Food-Population Imbalance

In mid-1964, there was a conference at MIT of 45 international experts on food production. They concluded that there were then four projects in the world that held considerable hope with regard to the problem of food-population imbalance.

1. In Gizera, Sudan, in 1925, experimentation was aimed at the introduction of long staple cotton to the farmers. At present, there are some 70,000 settlers on 1.8 million acres. It is basically a tripartite arrangement among the Government of Sudan, the Sudan Plantation Syndicate (a private agency), and the farmer. The farmers used to grow only food for themselves and fodder for their animals. In addition, they are now growing cotton for money. They follow very definite agricultural procedures and are not permitted to mortgage or fragment their farms. Although there was no land ownership in mid-1964, it appeared then that it would come to pass in the not too distant future. Their successful growing of long staple cotton has made a big difference in the overall foreign exchange situation of the country.

2. In the early 1950's, Cornell University purchased a 19,000 acre hacienda in Vicos, Peru. The tenants had traditionally worked three days of the week for the patron on his land and three days of the week on their own land. When Cornell became the patron, it introduced innovations. As a result, the tenants could do more work in less time on the patron's land and thus had more time and energy to work for themselves. In a decade, per capita income increased from $40 to $250. In time, Cornell began to think of enabling the tenants to become owners, a complicated issue which took over five years to resolve. During these five years of discussion, the production of the people went up and down in proportion with their expectations of getting land ownership. Significantly, in the year that they did get ownership, their output doubled.

3. The J.C.R.R. (Joint Commission on Rural Reconstruction) project in Taiwan began on the mainland in 1948 and became operative in Taiwan in 1949. It was headed by five commissioners, three Chinese and two Americans, appointed by their respective governments. Farmers were encouraged to play an active role in the process of development. Local farmer associations, set up all over the island, are responsible for hiring the 13,000 extension workers. There was also a considerable emphasis on involving the Taiwanese themselves at the administrative and technical levels.

In addition, a successful campaign resulted in effective programs involving the women and the children in the overall task of development.

Another interesting aspect of the J.C.R.R. experience has been in the area of family planning. A survey, quietly conducted in 1953, revealed that 98 percent of the Taiwanese women wanted to limit their families after they had had three babies. The resulting birth control program, like Japan's, is now one of the most effective in the world. Whereas Japan's program was accomplished primarily through abortion, the Taiwanese program is being accomplished through preventing conception.

4. The fourth project, Comilla, is described in more detail below.

The Comilla Project--East Pakistan

The Comilla project in East Pakistan was set up in 1956 by Michigan State University under Ford Foundation sponsorship. It was based on the need to develop a training facility geared to the needs of local village leaders. The Prime Minister, Chaudri Mohamad Ali, was especially concerned that the findings of the social sciences be made available to these leaders. It was decided that two academies should be set up--Comilla Academy and an academy in West Pakistan at Peshawar. Staff recruitment was on a worldwide basis, with major emphasis on recruiting Pakistanis at the training centers. The staff spent six weeks getting to know the state of affairs in the villages, then nine months in special training at Michigan State University. Finally, the participants spent three months observing community development projects in Europe and Asia.

Comilla Today

It should be helpful to look first briefly at where Comilla stands now. The Academy has programs in public works, public administration, local administration, irrigation, rural electrification, women's work, family planning, community education, etc. The program has had a very real influence on the villagers themselves. Their participation in the Academy programs has increased, as has their rice production and monetary intake.

The provincial departments have converted large numbers of the Comilla programs into provincial programs, particularly with regard to public works and local administration.

At the national level, many of the Comilla programs have been incorporated into the five-year plan. Also, an element of local participation has been infused into many of the national programs, a factor directly out of the experience at the Academy. For example, it was found that a family planning program could be much more effective if local people assumed responsibility for its development and operation.

This is very different from the West where professional county agents, social workers, public health nurses, etc. work with the families in the community. At Comilla, the villagers themselves choose from among their own people those who will go to the Academy and become extension workers for their particular village.

Comilla County

Comilla County is a region of very high population density, about 1,500 people per square mile, one of the densest rural populations in the world. About 85 percent of the people are farmers or living on farms. Of these, about 75 percent have some access to the land. The other 25 percent are farmers who, due to the extreme population pressure, are not able to obtain land.

In addition, Comilla is subject to periodic floods resulting from the monsoon rains and the inadequate system of levees on the Gumti River.

The success of the Comilla project, therefore, was not due to the existence of ideal conditions. In fact, if a program of this nature can succeed in Comilla, it can succeed anywhere.

Development of Comilla Project

When the Academy first opened its doors, certain political developments made it impossible for many of the villagers to come immediately. Akhter Hameed Khan, the director of the Academy, decided, therefore, to send the staff members into the villages to learn first hand about the people, their jobs, and their problems. This was a very significant, though inadvertent, experience, for when large numbers of trainees did come to the Academy, the professors were much more capable of understanding and suggesting measures to deal with their unique problems.

Once the town officials and villagers became involved in the programs of the Academy, appreciable gains were realized. Thus, with the aid of Japanese experts, rice production doubled during the first two years and has continued to increase. Next, they specialized in crops such as potatoes. In time, a cold storage system was established which provided for the overall leveling of prices, much to the farmers' advantage. With the continued increase in the amount and variety of farm produce, new avenues have opened up in exportation.

The innovations have increased the amount of land worked and extended the growing seasons. Since most of the work is still done by traditional means, employment increased significantly.

Can the Comilla project be reproduced in other areas of the world? We must realize that the amount of financial resources available at Comilla was extremely large. In addition, the quality of leadership is not easily duplicated. I would argue, however, rather than trying to reproduce the Comilla project as a whole, it is preferable to put those things learned at Comilla into use elsewhere.

UNEMPLOYMENT AND UNDEREMPLOYMENT IN DEVELOPING COUNTRIES

Frederick H. Harbison

A typical developing country, basically, consists of one or more modern urban sectors and a traditional sector. The modern sectors, which are separated from each other, usually contain the seat of government, large-scale manufacturing enterprises, modern buildings, institutions of higher learning, etc. However, in the countryside, the vast majority of the people are working in traditional agriculture, and in many cases, live the same way in which they have lived for hundreds of years.

Therefore, the typical model represents a traditional society with enclaves of modernization. I have one amendment to this notion of the dual economy. Surrounding the modern sectors is a fringe area in which the style of life is about half way between the traditional and modern.

As developing countries grow, the disparity between these two sectors increases. In most cases, the rapid growth in the modern sector has very little influence on the traditional sector.

Unemployment

Unemployment is a very significant problem in the modern sectors, not only in the overpopulated countries, but also in many of the underpopulated areas. Many of the underpopulated African countries, for example, have unemployment levels roughly equal to those of overpopulated areas such as India and Egypt. This problem of surplus manpower in the developing regions is getting worse with the passage of time.

Studies do not yet permit us to accurately determine the causes of unemployment in the developing countries. In many cases, there are no actual measurements of the unemployed in the modern sectors. Nonetheless, there are certain basic aspects of the problem.

Wages and earnings in the modern sector are much higher than in the traditional sector. Large numbers of people are attracted to the cities from the rural areas in the hope of better employment. Also, the higher the level of the wage, the greater is the incentive to introduce labor-saving machinery and technology.

Education also stimulates rural-urban migration. With education, the aspirations of rural youth are raised.

Contrary to general belief, employment in a rapidly-developing modern sector does not rise very rapidly because the modern techniques usually employed do not require a great deal of human labor. Modern methods of production in both public and private enterprises tend to substitute capital for labor.

Another very significant factor is high rates of population increase. This means very high rates of labor force increase. The typical newly-developing country has a population increasing at between 2 1/2 and 3 percent per year, and in nearly every case, this is rising. The rate of population increase in the advanced countries, almost without exception, is much less than 2 percent. To my knowledge, no country has ever solved a major unemployment problem while the rate of population increase in that country was as much as 2 percent.

Possible Solutions

In view of these and other factors, there is a sound basis for pessimism about unemployment and underemployment in the modern sector. However, let us consider some possible solutions:

1. Since the relatively high urban salaries draw people out of the rural areas, lowering the salary levels has been suggested. Although this sounds plausible from the economic point of view, it is totally impractical. Under what circumstances are people in the modern sector going to accept a cut in their earnings? An alternative would be to put a ceiling on salary levels, not permitting advances beyond a certain

point. This has been tried in Nigeria and other African countries. The only problem has been the constant pressure to raise the ceiling.

2. It has also been suggested that rural-urban migration could be decreased by eliminating education. This appears to be a logically acceptable measure, but in view of the high value placed on education, it is about as implausible as eliminating public health to reduce the rate of population growth. We must reject it on humanitarian grounds.

3. A shift from capital-intensive to labor-intensive production in the modern sector is another potential means of alleviating employment problems. Why bring modern technology into newly-developing countries where capital and foreign exchange are limited and human labor is in abundance? Again, however, we need to be cautious about being overly optimistic about this solution. Actually, the modern manufacturing sector in developing countries employs relatively few people, usually around 5 percent of the country's labor force. Thus, even if we were to double the number of workers needed through labor-intensive means, this would make only a small dent in the employment situation. In fact, in most developing countries, many more people are employed as school teachers than are employed in manufacturing and commerce combined. Thus, it would seem to make as much sense to expand the education industry. Another problem with labor-intensive methods is that they tend to retard the development of an export market.

Realistically speaking, the most effective focus for a labor-intensification program is in the fringe areas surrounding the modern sector, already the most labor-intensive sector. It is also the most rapidly growing sector because people often settle here when they cannot find employment in the modern sector. It would probably hold true in most areas that, for every person employed in the actual modern sector, there are three or four people somehow eking out an existence in this low-productive fringe sector.

4. The government could help by requiring industries to raise their levels of employment and by placing tight restrictions on laying off employees. This would store excess labor within the industries. However, this also has some practical limitations. In Kenya, for example, industries were required to increase their levels of employment by 15 percent. The only problem was that in reaction to this increase in job opportunities, so many new people entered the labor force that the unemployment rate actually increased.

5. Perhaps a quicker and more efficient way of dealing with the problem is through the army. If people cannot be employed productively in the modern sector, perhaps they can be used to develop a mass army. This would not be done for purposes of security or invasion but to utilize unemployed people and teach them skills with practical application in the domestic economy. Although such a program should prove valuable, it may be difficult to implement, since few military leaders conceive of the army as being responsible for the problem of unemployment.

6. Construction is the least efficient modern industry and, hence, the most labor-intensive. By initiating a massive public works program, building roads, irrigation ditches, and the like, it will be possible to soak up a large amount of unemployed labor.

Rural Transformation

In the final analysis, however, the basic solution is to keep people on the land in the rural areas. Therefore, agricultural output must be increased, and at the same time, rural communities must be developed so that they become places where people can earn a good living and want to stay. In a word, the greatest problem facing the newly-developing countries is not the industrial revolution, which is going ahead anyway, but a rural transformation through the development of a productive and prosperous rural economy, which may indeed be necessary for the industrial revolution to take place. For unless you can build up the purchasing power of the people in the rural areas where most of the people live, there will not be an expanding market for the produce from urban industries.

One of the major elements in rural transformation is that an increase in agricultural output is needed, particularly in food production. In most of the developing countries, population is growing at a greater rate than the food supply.

How can this increase be accomplished? Significant research in agricultural methods is a primary requirement, including a thorough investigation in the countries themselves, to determine those combinations of inputs that will lead to the highest possible level of production in a given area.

The agricultural economists inform us that there is no use working to increase food production by 20 or 25 percent per year. Such limited gains are not easily recognized by the farmers and peasants. Rather, what is needed is the means to double production in a year or two. Such spectacular gains provide a much firmer basis for convincing the people that the new methods really make a significant difference.

But, in the newly-developing countries, there is a considerable deficiency in the research necessary to bring about such spectacular results. It is essential to devote a great deal more resources to research and development.

If such new methods are developed, it then becomes necessary to teach the farmer and the peasant to use them, thus requiring a vast increase in agriculture extension service and utilizing more of the labor force in the countryside.

Even if the problem of agricultural output is solved, a means would still be necessary to market the agricultural produce, such things as access roads, marketing cooperatives, credit organizations, and various other agricultural-related services. I estimate, therefore, that for every person added in agricultural extension in order to increase output, it will be necessary to add two or three persons in marketing activities.

As agricultural technology becomes more highly developed, fewer people are needed in agriculture itself, and more and more workers become available for the development of community services, small industries and handicrafts, and rural public works programs.

Rural transformation, therefore, is not simply a revolution or technological breakthrough in agriculture. It means, rather, the development of rural economies of which agriculture is the base.

If this is correct, a basic rural transformation should be able to raise the earnings in rural areas relative to those in the modern sector. This would slow down and perhaps even reverse the trend of migration to the urban areas.

But, the difficulties involved in rural transformation are considerable. Most important is that it would be necessary to invest more and more in the rural areas and less and less in the development of the modern sectors, a shift difficult for the planners in many developing countries to understand.

Further, there would still be a major manpower problem. Rural transformation requires unknown quantities and types of skilled and unskilled people, who would be drawn from the rural areas. One primary reason for rural transformation in the first place is to create job opportunities for the rural inhabitants so that they will be less tempted to migrate to the urban areas.

One of the main problems with rural transformation is that we know so little about it as a process. The least-developed area of the so-called science of economic development is the issue of how to increase agricultural output to bring about rural transformation.

Despite these and other obstacles, I maintain that rural transformation is the key to the economic development of newly-developing countries. **Planners must overcome the tendency to focus on urban modernization merely because it is easier to understand.**

THE ROLE OF WAGES IN ECONOMIC DEVELOPMENT

Everett M. Kassalow

What is the role of the wage structure in developing countries? It is difficult to generalize about the role of wages in economic development. There is, however, a recurring theme, one which lies at the heart of both capitalist and communist development theory. This is the assumption that the pathway to economic development must be a difficult one, involving the grinding of the working class in order to accumulate the necessary capital for development. Recently, many students of development have argued that it is important to protect and improve human as well as capital resources. This group contends that it is foolish to assume that the road to economic development must inevitably be paved with human loss.

In line with this new thinking, it is apparent that we will need new policies. Nevertheless, much can be learned by studying the past.

Turning, then, to the early development of Western Europe and the United States, we see that wages were determined in a free market. By the twentieth century, this was no longer so. Trade unions arose and played an important role in the setting of wages. And in today's developing economies, one of the first things we notice is that the free market is less important than ever; there is a strong commitment to institutional wage setting. This is not surprising. When a government commits itself to accelerated development, it is unlikely that it will leave wage determination up to the play of the market. There are additional reasons why free market wage determination is not easy to accept. In many countries, because of former colonial rule or centralized planning, large numbers of people work for the government. This has an important impact on wage structure and policy in these economies. Needless to say, this was not true of the United States or Western Europe when they were developing.

With the above serving as a background, let us turn to an examination of the characteristics of the wage sector in less-developed societies. To begin with, the wage sector is usually small, involving anywhere from 5 to 25 percent of the total labor force. Of these, 40 to 50 percent work for the government, and, in addition, many people may work for a few large foreign-owned firms. This latter situation creates special problems for wage policy, since these firms are usually more efficient and profitable than domestic concerns, and they can afford to pay higher wages.

A second noteworthy characteristic is that wage differentials between skilled and unskilled workers in the underdeveloped countries are far greater than in the developed ones. This is also true of white-collar as opposed to blue-collar workers. White-collar workers tend to receive much higher wages, apparently due to the prestige associated with this type of employment. Related to these issues is the problem of what to pay native workers when foreigners, who typically receive very high wages, leave or are replaced. In general, as a long-run goal, it is undesirable to have extreme wage differentials because they are costly and breed discontent.

Another issue in the developing economies centers around the urban and rural wage differential. The income of the urban employee is often three, four, or five times that of his agricultural counterpart, and this disparity seems to increase as the country develops. To correct this situation, the first impulse, frequently, is to advocate a wage freeze for urban workers. While this might be morally justifiable, it is not politically feasible. History, it appears, has been on the side of the urban workers, and it may be that the productivity of these workers has increased rapidly and/or they have been the more powerful, politically. In any case, statistics bear out the fact that over time the per capita income of the people in agriculture as a percentage of the per capita income of people in other sectors has fallen. And this is true for countries that have developed as well as those that have remained underdeveloped. The only exceptions to this are the United States and Great Britain, but this merely reflects the subsidization of agriculture in these two countries since the 1940's.

Another important problem in the developing economies is the minimum wage. In the United States, this issue is not too important since most people earn a wage above the minimum, but in the less-developed countries, many people are affected by the minimum wage. It is thus a matter of great political concern, and care must be taken so as not to set a minimum wage that will discourage new companies contemplating investment and encourage existing companies to invest in labor-saving equipment.

In many of the developing economies, workers are paid allowances in addition to their regular wage. These, for example, might take the form of medical, housing, or seniority allowances. Whatever the form, the result is a wage structure in which a man's earnings may have little relation to the job he does. This question of traditional payments, then, is another problem that must be faced. This is not to say that these payments should be eliminated but that the wage must come to reflect more closely the value of the job being done.

I would like to conclude with several notes on general wage policy. For one thing, it is usually foolish to attempt wage freezes because of the resentment created by such measures. Workers, furthermore, should be given part of a rising output in order to convince them that they have a role as well as a stake in economic development. In addition, if many of your countries are to develop further, they will have to build up the domestic market as well as the international one. This means that wage policies should be set so as to enable workers to afford to purchase the extra goods. Development is not an easy process, and one of its disturbing aspects is that high civil servants often preach sacrifice while taking very high wages. This can only cause discontent. Another basic point: It is probably hopeless to plan the entire wage structure. We simply do not have enough knowledge, and even if we did, we could not enforce such a comprehensive plan. If the government feels that it must fix wages, then it should do so for certain key jobs. Even then this should be done with the participation of management and labor so that all will feel they had a part in the decision-making process.

ACTIVE MANPOWER AND EMPLOYMENT POLICY: LABOR SUPPLY AND DEMAND

Burnie Merson

Introduction

An important part of a developing nation's arsenal of economic and social weapons is an effective commitment to an active employment and manpower policy and program for full, productive, and freely chosen employment. Full employment ranks with rapid economic growth, stable prices, social justice, and a favorable balance of payments as a prime objective in most countries seeking development.

Although an active employment and manpower policy alone will not bring full, productive, freely chosen employment, it is complementary and often vital to the success of other essential development ingredients.

An active manpower and employment policy has four mutually reinforcing functions: (1) development of the abilities of the labor force; (2) helping create jobs to make the most of these abilities; (3) linkage of these two by matching men and jobs; and (4) improving productivity while protecting welfare and dignity.

Manpower policy relates to the development and welfare of the labor force, and the matching of available manpower with available jobs. By promoting the mutual adjustment of manpower needs and resources, it is expansionist with regard to employment and production but anti-inflationary with regard to costs and prices.

Employment policy is designed to influence the overall level of productive employment in the economy. It can reinforce and is, in turn, reinforced by economic growth. Employment of more labor will generally increase total output, and given appropriate measures to raise the level and improve the pattern of investment, more employment can also lead to a higher rate of economic growth. A higher rate of growth will, in turn, facilitate absorption of more labor at higher levels of productivity.

Manpower and employment policies, as well as programs and institutions, have to be integrated and coordinated and be a part of overall economic and social policymaking. The 1964 Recommendation of the OECD Council on Manpower Policy as a Means for the Promotion of Economic Growth states, "Manpower policy should be one of the main elements of economic policy in pursuit of the OECD growth target; at the same time, the social aspects of such a policy should always be borne in mind."

Labor Supply

Members of the labor force cannot be viewed in gross numbers alone. The working population is made up of wage earners, unpaid family workers, self-employed, and employers who work or who seek employment. It includes civilian and military workers, public and private workers, rural and urban workers, old and young workers, male and female workers, handicapped workers, minority group workers, employed and unemployed workers, citizen and noncitizen workers. Specifically, there is health-manpower, industry-manpower, education-manpower, agriculture-manpower, transportation-manpower, and the like. In short, manpower staffs all sectors of the economy. Moreover, manpower is a horizontal resource, i.e., economically active people are generally not tied to one sector.

Improving the skills, knowledge, abilities, attitudes, and motivations of the labor force is a never-ending process, and there is no single best way to develop and maintain a qualified labor force. Human capital formation is achieved by a judicious combination of many methods and techniques, including on-the-job training, apprenticeship and union-sponsored training programs, private technical institutes, trade and business schools, armed services training programs, the formal education system, in-service training by government agencies, job mobility, selective immigration and emigration, skills upgrading by agricultural extension agents, and use of foreign contractuals and technical assistance.

Education of those outside the labor force is not within the scope of this discussion. Training includes programs contributing directly to increasing labor force skills and building training capabilities. Skill training includes: (1) initial training of newly hired workers; (2) upgrading skills of currently employed workers; (3) retraining employed workers for jobs requiring different skills; (4) training unemployed and underemployed workers to meet skill requirements of job vacancies; and (5) training of young persons for highly skilled occupations.

Building of training capabilities includes: (1) training of foremen, instructors, and supervisors to give on-the-job or job-related training; (2) development of training directors in sizable establishments, public and private; (3) preparations of teachers to provide theoretical or related instruction for apprentices and other on-the-job trainees; and (4) creating or strengthening institutions involved in occupational training, such as a bureau of apprenticeship and training, an in-service teacher training institute, a nurse's training system in a hospital, and an agricultural extension service.

Also to be included are such techniques as self-study and self-improvement by workers by means of technical books, correspondence courses, educational television, programmed learning, radio, hobbies, and do-it-yourself activities.

A balanced approach must also include such additional factors as: (1) monetary and nonmonetary incentives; (2) labor market statistics; (3) labor standards; and (4) research.

For example, training programs become more effective when incentives cause workers to want such training. Labor market information is most useful in planning, implementing,and evaluating occupational training programs. On-the-job training may fail if unsupported by adequate labor standards relating to such factors as working conditions, trainee-supervisor relations, compensation for occupational injuries. Finally, each country needs a manpower research capability to provide for continuous review and use of many manpower programs and institutions.

Labor Demand

How a given country organizes to attain and maintain full employment will vary as conditions change. Each nation has its own evolving cultural pattern, economic system, and sociopolitical structure. Fiscal, monetary,investment, and manpower policies and programs are all involved.

Fiscal policy is a powerful tool in a full employment program. The government expenditures can inject purchasing power into the economy. Firms in labor surplus areas can be given preference in the awarding of government contracts. Public money can be used to facilitate and stimulate workers. Social insurance programs can maintain the purchasing power of workers who fall victims of involuntary unemployment, industrial accidents, sickness, and old age. Public works can be provided in rural and urban areas. In short, purchases of goods and services, transfer payments, subsidies, grants-in-aid, and taxes are fiscal instruments for job development.

Monetary policy actions changing the availability and cost of credit can affect expenditures and, hence, employment levels. For example, lower interest rates on home mortgages can increase the volume of construction jobs and related employment opportunities. The purchasing power of workers can be stimulated by fair wages and making credit easier. Countries can influence employment-generating demand by manipulating the discount (or rediscount) rate or having recourse to open-market policy.

To raise a country's capacity to produce, the people must continaully expand, improve, and rebuild its productive capital: physical, human, and institutional. Foreign investors are influenced by the availability of skills, the country's labor-management relations, and wage rates. Development planners must weigh the advantages and disadvantages of labor-intensive versus capital-intensive technology when deciding upon the kind of investment to make in many specific projects. Countries can encourage the syphoning off of a portion of worker incomes for investment in new plants and equipment. Social insurance reserve funds can be invested in social and economic infrastructure. Employment services can engage in aggressive job-development activities. Plants can go on multiple shifts to meet needed demand when qualified staff are available. Plant machinery and tools can be used for training purposes after working hours. Excessive overtime can be eliminated to open up new employment opportunities without getting into spread-the-work measures.

Although there is an "expansionist versus structuralist" disagreement among some economists, most believe that both approaches are necessary and that the policy implications of the two theories differ more in emphasis than in content. Adequate demand measures must be accompanied by programs to improve the quality of the labor force and to increase labor mobility. Manpower programs to attack structural rigidities are advanced when total demand is high within the economy.

Economic expansion is itself inhibited by an untrained labor force not properly distributed. Manpower policy activities have a positive and reciprocal effect on employment, and many economic policies can expand employment levels.

Monetary and fiscal measures, although very important in economic growth, are blunt tools for solving specific problems among specific groups in specific areas. They also tend to overlook the problem of priorities in the manpower field. Overall demand-generating or demand-restricting devices are mainly rough instruments requiring refinement by complementary manpower programs.

Finally, employment policy can only be achieved if pursued in conditions of freedom. Full employment is not merely the fact that there are no unemployed. The concept of full employment must be bound up with that of liberty; i.e., that the worker is free to choose his job without any interference or discrimination by the state.

Public and private policies which facilitate free and prudent choices by individuals as to where and at what they shall work and invest will produce the most efficient as well as the only morally acceptable economy. Government policies and programs should establish the institutional framework and catalyst to private and local efforts.

The concept of "freely chosen" employment is thus not merely a rejection of coercion but a positive belief that men should be helped to choose effectively. A choice that is limited by narrow alternatives is not genuinely free. An active manpower and employment policy attempts to enlarge the scope of worker employment and training opportunities, job vacancy information, employment counseling, placement help, and other services which give practical meaning to the ideal.

PART III

Manpower Planning and Allocation in Economic Development

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MANPOWER PLANNING: HISTORICAL PERSPECTIVE, CURRENT STATUS

Edgar C. McVoy

Although manpower planning began over four thousand years ago with the Chinese and Egyptians, modern development of the concept has taken place primarily in Europe and North America during the past two or three decades. The three most important elements of manpower planning are:

I. Planning for Skills Needed for Development
II. Planning for Population and Employment Levels
III. Manpower Distribution and Utilization

The first element has been given the most emphasis during the past 20 years, while the second has been given increased attention in the last five. The third element, however, has continued to be very badly neglected.

The primary concern of the following discussion is the evolution of manpower planning in developing countries during the last 20 years. After the Second World War there was the surge of newly independent nations, which not only sought political independence, but also economic growth. At first, many people believed that economic growth was a fairly simple process, requiring mainly: enough capital, a good model for development, and a good deal of emphasis on industrialization. It would then take only a few years for the less-developed countries to get the knowledge and skills needed from the advanced countries.

It was thought that technicians and managers could be supplied from abroad until domestic technicians could be trained. It was at this time that a device called the "manpower survey" originated.

Promoted in the early 1950's by the International Labor Office, and by the United States Government, in a program called "Point Four," the survey was primarily concerned with industry, and assumed it was necessary to develop skilled workers through fairly short-range types of planning. Thus, the manpower survey was mainly an establishment survey, primarily industrial establishments, studying the employment situation there, and asking employers to forecast their labor requirements for the next few years.

This kind of survey was useful mostly in planning short-range training of skilled workers and middle level technicians. But it was a one-time study, usually with no trend data, and confined for the most part to the industrial sector which constituted a minority in most economies.

The ILO then spent several years doing a more complete and useful analysis called manpower assessment. The assessments assembled the pertinent data in a country on manpower supply and requirements, balanced these to reveal the gaps, and projected manpower supply and needs a few years into the future.

The final types of short-range manpower planning to be considered here are "occupational studies," and "area skill surveys." Both of these have had their greatest development in the United States. The European, and more recently, the Asian, African, and Latin American countries have also contributed to occupational studies development. This international effort culminated in the ILO's International Standard Classification of Occupations (ISCO).

The area skill survey is related to the labor market study and the occupational studies, and, basically, projects short-term training needs within a specific area.

These different techniques serve as the basis for short-term manpower planning in connection with the first major element, Skills for Development, particularly with respect to technical education, vocational training, and in-plant training of skilled workers and middle-level technicians.

The implied promise of prosperity in a few years without much pain, has not materialized in most countries. It is difficult to determine whether the approach to planning or its implementation was inappropriate. The fact is, however, that the strategy which emphasizes industrialization in a fairly short period through the injection of know-how and capital from advanced countries has met with limited success.

A second category of human resource planning, long-range planning, has been emphasized in most countries during the past five or six years. One instance of this long-range approach, developed around 1960, might be referred to as the high level manpower cult. The basic idea is that economic growth depends on the leadership and ability of highly trained people, such as scientists, technicians, inventors, entrepreneurs, etc; if a country had enough of these, they would bring the masses of people along with them. The conclusion then, was that most of the investment in human resources should be for high level manpower development.

The key problem is to determine how many of these trained people will be needed in a country over a period of ten to 15 years, and then to gear the educational system to produce them. This approach produced a gap between the planners concerned about the short run needs for skilled manpower, and those who emphasized long-range training of middle and high-level technicians.

Some countries such as India developed good forecasts of the need for high-level technicians. The results of these projections have been very profitable for the country's development.

There have been two or three approaches to analysis of high-level and middle-level manpower needs. In the early fifties, the United States Bureau of Labor Statistics developed a technique called the "industry-occupation matrix," which takes into account predicted changes in the type of industry, the level of technology, and other factors.

A parallel system, developed in Europe by the Organization of Economic Cooperation and Development (OECD), involves predicting economic growth by industrial sector, and then determining the manpower needs according to those projected growth rates.

A related approach, known as the international comparison approach, has been attempted informally in several countries and has been systematically studied by Morris Horowitz and his associates at Northeastern University.[1] Horowitz found a high correlation existed between occupational patterns and labor productivity in 20 countries, most of them advanced. Thus, for example, a less-developed country, desirous of building up its chemical manufacturing industry, would choose one of the more advanced countries as a model to determine the percentages of various types of manpower necessary for the future development of that industry.

In recent years, Frederick Harbison of Princeton has been working with systems analysis, balancing a number of factors that affect manpower development into a comprehensive approach to human resource planning.

W. Lee Hansen and Burton A. Weisbrod of the University of Wisconsin emphasized the notion that manpower, particularly at the higher levels, will generally follow the classical economic principle of supply responding to demand. For example, if engineering provides higher income than other professions, more young men will choose it. This tends to create an over-supply of engineers, salaries will go down, and less young men will enter the field. It is readily apparent that this approach has serious limitations for the developing countries.

Few countries have faced the second major element, Planning for Population and Employment Levels, seriously until the last four or five years. Using my own personal experience in Indonesia, it was apparent ten years ago that there was little concern about the population problem or the levels of employment. It was believed that there was more than enough available land, and that a larger population was indeed desirable. Thus, the main emphasis ten years ago was on the first major element, skills for development.

On a recent visit, however, it was apparent that population growth in Java has reduced land holdings to about .4 hectare per farm family, and migration to the less-populated islands has not proceeded fast enough.

Therefore, at the higher levels of policymaking there is now significant concern for the development of a family-planning program and measures to counteract the problems of unemployment and underemployment.

By the same token, the concept of industrialization has shifted to emphasis on food production and rural development, not only in Indonesia, but in many other less-developed countries as well. These two points have great significance. Many of the current plans give at least as much attention to this problem area as to development of skilled and trained manpower.

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[1] Manpower Requirements for Planning: An International Comparison Approach, by Morris A. Horowitz, Manuel Zymelman, and Irwin L. Herrnstadt, of the Department of Economics, Northeastern University.

The third element of manpower planning, Manpower Distribution and Utilization, needs priority attention in most countries, including the United States. The wasting of trained manpower in any country is enormous, and becomes more so as education increases. Indonesia, for the last ten years has been producing more educated people than the economy can absorb, both in terms of quantity and fields of specialization.

The American colonial experience also illustrates the significance of this third element. During its colonial period, there was a severe shortage of skilled workers. It was partly because of this situation that the process of mass production was developed.

This illustrates the process of substitution, a term borrowed from economics, referring to the substitution of one kind of labor for another. Thus, because skilled craftsmen were not available, America developed a combination of capital with less-skilled labor to produce what skilled craftsmen would otherwise have produced.

Manpower planning used to be a secondary consideration in economic development plans. In the last few years, however, there has been a recognition in Europe and in the United States, as well as in several developing countries, that manpower is one of the most dynamic factors in development. For example, nothing happens to natural resources unless people do something with them. If human resources are better utilized and more fully employed, fairly small investments in human resources of the right type will give great impetus to the development of the economy as a whole.

Another school of thought of some economists and bankers believes that monetary policies, fiscal policies, and some economic manuevers, are the key to development, and to full employment. However, it is apparent that people do not get jobs and become productive merely in response to changing the interest rate, or the maneuvering of the national budget, or by simply letting economic forces prevail.

In my opinion, a high level of unemployment and underemployment could be a drag on the economy, even in a short interim period while waiting for the momentum of the economy to provide more jobs, because people have to eat, whether they are producing or not. In addition, there may be social and political dangers. Further, if jobs can be provided for some of the unemployed or underemployed, with a small outlay of capital and a large element of labor on work with economic value in the relatively short run, this becomes a net asset to the economy.

ASPECTS OF MANPOWER PLANNING

Sanford Cohen

Since World War II, considerable effort has been expended by and on behalf of developing nations to establish goals which will hasten the achievement of what W. W. Rostow refers to as "the stage of economic maturity." More and more of the countries are becoming aware of the need to include manpower planning in their overall national economic planning.

In a broad sense, manpower planning may be defined as any systematic public effort to influence the allocation of labor among possible uses and to promote the efficiency of labor utilization. Planning may be undertaken for long-run or short-run objectives. It may be so comprehensive as to encompass a total national strategy or so narrow that it is directed toward the problems of single industries or even single plants.

Why Manpower Planning

Why manpower planning? The basic answer is that the market mechanism in the developing economies does not lead to labor allocations and utilizations that are consistent with the ambitions of overall national development targets. In less general terms, it might be noted that rising levels of open unemployment and chronic conditions of underemployment are not likely to be alleviated in the absence of special efforts. Capacitation of adequate numbers of persons with the skills required for economic development, furthermore, will not occur unless special attention is directed toward quantitative and qualitative characteristics of a national education program.

Problems in Manpower Planning

A hard look at recent experience suggests that manpower planning efforts have enjoyed, at best, a very modest degree of success in the developing nations. Both social and technical considerations may be identified by way of explanation. Many nations have not taken their own planning efforts seriously and, within planning units, manpower planning has not been sufficiently integrated with general economic planning. Due to a sparsity of data and a lack of expertise, manpower plans that have been formulated are frequently too fragile to merit consideration as serious planning instruments. An additional problem is that manpower planners have had a tendency to follow a particular methodology too mechanically with the result that the technological and sociological constraints that condition labor utilization in a particular society have been ignored. Many manpower plans, thus, have lost touch with reality and, consequently, have had little operational impact.

On the less pessimistic side, it can be noted that the significance of human resources in the development process is now widely recognized as well as the necessity of special measures for the alleviation of unemployment. Recent shifts in thought, furthermore, have focused more attention upon the agricultural sector and upon the labor problems of that sector. We have reached a point where there is something of a consensus concerning the need for improvements in the manpower planning methodology, more empirical evidence concerning sociological and other constraints that condition labor utilization, and serious attention to the immediate problems of unemployment and underemployment.

Even the sketchiest survey of manpower and employment problems is sufficient to show that more than economic considerations are involved. It is unlikely that a manpower planning unit will be effective unless it addresses itself to population problems, rural sociology, mobility patterns, quality of education, social class relationships, the nature of government bureaucracy, etc. Typically, manpower planning groups in the developing nations have not taken such a "broad" approach to their responsibilities. But a broad approach is essential for identifying problems that are peculiar to national and subnational economies and for avoiding what might be intolerable degrees of error in culture-free estimates of the supply of and demand for labor.

Unemployment, Underemployment, and Skill Supply

The problems which have preoccupied manpower planners and which are, of course, the hard core of their concerns are open unemployment, underemployment, and skill supply. Open unemployment has emerged as a major problem for a number of reasons. Many forms of industrialization do not create a significant number of jobs. Thus, while gross national product may grow at a very rapid rate, there may be relatively little reduction in the size of the unemployed population. In fact, development may be associated with a rise in urban unemployment because of large annual additions to labor force size that reflect both population growth and rural to urban population movements. For many nations, the creation of jobs in the short run has become a more pressing target than maximization of income in the long run.

Underemployment, though hard to measure, is relatively easy to explain. It means, simply, inefficient utilization of labor. Inefficiency may manifest itself in the rural areas when population presses upon land resources, or it may occur in the urban sector in the form of redundancy in employing establishments or in the petty street trades. Explanations of underemployment stress: (1) the lack of cooperative resources such as land or physical capital; (2) sociological considerations; or (3) political factors. Although one might get a different impression from some of the literature, these are partial rather than conflicting explanations. Underemployment, in short, occurs for many reasons, and it is important that manpower planners identify particular causes in their own nations in order that policy measures be appropriate.

The significance of skill shortages varies considerably among nations. In some, of course, the shortages are extreme. In others, it is not apparent that a lack of persons with middle and higher-level skills has been a major development bottleneck. National differences in this respect are well to keep in mind lest one get caught up in the general clamor for vocational and professional training without some guideposts for quantitative and qualitative direction.

The precise relationship between quantities of labor skill and development rates is unclear, and this places a heavy burden upon manpower planners. Complicated questions like how much education, what kinds of education, the relative merits of education as against other forms of investment, and the timing of educational problems are not easily resolved by present educational planning methods. The problem is acute because of limited resources in the developing nations. Everyone can agree that there ought to be more education but, unfortunately, this is not the significant question. The "big" question is how much more, and this raises the further question of the relative returns to education as against other forms of investment. It is impossible, in other words, to avoid confronting the cost-benefit problem.

The Role of Manpower Planning

Perhaps the most important decision regarding manpower and employment that many nations have made in recent years is that these must be areas of conscious concern. Whatever the efficiency of the market mechanism in the developed economies--and it is clear that markets even in such economies produce less than optimal results--it must be apparent to anyone who has lived or worked in the developing economies that the labor markets there are heavily encrusted with a variety of frictions that inhibit economic efficiency. It is an overstatement to describe the situation as totally institutional. The large numbers of persons who are drawn to employment in the flourishing black markets and the multiplicity of open air markets which closely approximate the economist's competitive model testify to the strength of economic forces even in environments that are hostile to competitive behavior. The overall impression of most observers, however, is that there is a need for public direction to attack the wasteful use of labor, the frequent overresponse to economic stimuli, the lack of familiarity with the norms of industrial society, the economically irrational movements of population, the paucity of educational exposure, the shortage of administrative talent, rampant nepotism, and the power plays of various interest groups.

The general policy instrument that many developing nations have selected is manpower planning. As practiced among nations, manpower planning may consist of little more than statements of intent; it may mean the appointment of a small planning group of technicians who accumulate facts and figures that no one pays attention to; or it may mean a serious effort to analyze a national problem and to integrate manpower planning with national economic planning. Due in part to the efforts of the ILO and AID, the idea of manpower planning has gained in popularity, and most of the developing nations have made at least one attempt to draw up a set of manpower plans. Due also to the influence of ILO and AID, these plans have tended to follow a set methodology which emphasizes the use of statistical descriptions and projections.

Familiar Manpower Problems

Manpower planning problems will be divided here into two general categories, the first containing problems with which we are quite familiar; the second dealing with those which may be less understood.

The "familiar" problems include: (a) Lack of data (population information, occupational statistics, etc.). This is serious in that popular manpower planning methods can only be effective if certain amounts of data are available. (b) Difficulties in deriving accurate estimates of future manpower requirements. This problem exists because few processes have rigidly fixed production coefficients and, thus, varying quantities of skills or varying combinations of capital and labor can be used. (c) Difficulties in forecasting future labor force size in a dynamic economic setting. (d) Difficulties in relating occupational requirements to educational programs.

Less Familiar Manpower Problems

The less familiar set of problems is that which will be emphasized here. One of these problems is found in the relationship between the manpower planning unit and other governmental agencies which may take their own planning approaches without concerning themselves significantly with decisions made by the planning body.

A second is that of the interrelationship between occupational structures at the project level and national employment objectives. Typically, there has been a weakness in the link between macro-economic policy and the actions of those in charge of individual projects. The problem might be described as a case of "reverse bureaucracy." In a usual bureaucratic setting the power resides at the top of the structure, and the degree of authority held at lower levels is determined by general rules. In this type of relationship the ability of the lower levels to frustrate policy is limited by the character of the authority delegated to them. But when authority by level is loosely defined, the opportunity to disregard general policy is greatly enhanced. This disregard has serious implications because independently made resource commitments may very well be irreversible, thus limiting the scope of future planning alternatives.

When project personnel select a particular technology, they define the occupational character of the work force and, after resources are committed, a condition of irreversibility sets in that severely limits the options available to manpower planners. The problem is compounded when a project's occupational structure is used as an indicator of future labor requirements and becomes the basis for determining the character of future training programs.

At the project level, we find a concern with engineering or technological problems which frequently clashes with the "economic" approach taken by the planner. Even when project supervisors are somewhat economically oriented, imperfect labor markets and institutionally determined wages may discourage reliance on the market as a guide to determining proper occupational structures. This disparity in the preoccupations among project and national planning levels of authority argues strongly for closer cooperation between personnel at the two levels.

Another problem results from the weakness of the link between manpower planners and educators. Close cooperation is necessary, in this case, to resolve problems associated with a conversion of data on skill requirements into educational programs, to disaggregate global data into regional or local dimensions, and to examine alternative approaches to skill capacitation so as to optimize the results of investments in education.

Knowledgeable Planning

Knowledgeable economic planning requires that planners be aware of both the technological and non-technological influences that condition occupational skill profiles at the project level. By way of illustrating what we refer to here as technological influences, illustrations will be drawn from selected industries.

In the cement industry, personnel requirements will vary depending upon whether wet or dry manufacturing processes are used, the degree of automation, and output scale. The number of managers and supervisors required in the cement industry apparently increases as output expands to 200,000 tons per year. Beyond this level, further increases do not seem to occur among these occupational classes, but an increase does occur in the number of office, clerical, and miscellaneous non-production workers.

In the fertilizer industry, a large proportion of the industry's labor force must be graduate engineers, chemists, skilled technicians, and craftsmen. Technical manpower requirements do not appear to be seriously affected by changes in plant capacity, but the number of production workers does increase due to heavier labor requirements for packaging and plant maintenance. Type of process affects manpower requirements in a significant way. Thus, plants producing 100,000 tons of nitrogen per year in the form of ammonium sulphate or ammonium nitrate require approximately 100 more workers--half of them skilled-- than when the output is in the form of urea. When more than one type of fertilizer is produced in a plant, manpower requirements at all skill levels increase markedly.

It is difficult to generalize about manpower requirements in the leather and shoe industries because of possible variations in plant size, raw materials, processes, and end products. Shoes may be made in one-man shops or in large integrated establishments with their own tanneries and slaughterhouses and with thousands of employees.

From these few examples, several broad conclusions might be drawn:

1. When raw materials, processes, and final products are fairly standardized, the experiences of the developed economies provide a reasonably reliable base for estimates of skilled personnel requirements in similar industries in the developing nations. When raw materials, processes, and end products are subject to large variations, occupational data drawn from the more developed states may have little direct applicability.

2. Necessary quantities of management and technical skills are not simple functions of output in many industries and, among industries, different factors appear to dominate as major influences upon high-level skill requirements.

3. The prevailing preoccupation with the problem of estimating quantities of skills required for industrialization may have obscured the need for a more accurate description of the variables that determine the types of skills needed.

Social and Cultural Factors

Social and cultural factors constitute an order of constraints and complications that are very significant for manpower planners. To ignore them is to ignore major barriers to the transformation of the traditional labor force to one capable of functioning effectively in a modern setting. Although our knowledge of the effects of different background characteristics upon occupational behavior is quite rudimentary, we do know that the work norms that apply in the industrialized economies may contrast sharply with the accepted modes of behavior in the developing nations. What one finds, frequently, is that employers in these nations make numerous compromises with the non-industrial environment. In fact, employer's behavior itself may be severely at variance with the norms of an industrial society.

This has implications both for manpower and educational planners. The economist has to realize that environmental characteristics define what must be modified. The educational programmer must shift part of his emphasis away from "mechanical" concerns (number to be trained, types of training to be offered) to a study of the clash between behavioral modes of non-industrial societies and the requirements of industrialization.

This presentation has attempted to suggest less familiar explanations for manpower planning failures, with stress on the technological and sociological naivete of prevailing methods of planning. The hope, in mentioning these little-explored areas, is not that an abrupt shift in planning emphasis will occur but, rather, that some start at correction or elaboration of manpower planning objectives will be made.

Conclusion

To summarize, although we certainly know much more today than we did ten years ago, it would be misrepresenting the state of our knowledge to argue that we have adequately defined the labor problems of the developing nations and, certainly, present planning methods must be regarded as primitive tools. The major purposes of an extended manpower seminar are to describe the present state of an art so as to avoid the failures that follow from a mechanical reliance upon a particular methodology and to help manpower practitioners derive the maximum benefit from the experiences of the past and from a very incomplete but rapidly growing body of knowledge.

ANALYTICAL APPROACH TO MANPOWER PLANNING PROBLEMS

Eli Ginzberg

Manpower, by its very nature, is embedded in the total institutional framework of society. Manpower problems, therefore, cannot be dealt with primarily as problems in econometrics or in mathematical model building. They can be appraised best in a matrix that extends beyond the economic marketplace, without denying the obvious importance of the market. In the developed countries, the results of manpower planning, which has relied heavily on mathematical models, have not been very impressive. The limitations of an over-structured approach to manpower planning are also revealed in the experiences of the less-developed countries. Notable gaps exist between these plans and their utilization and realization--gaps indicative of both supply and demand problems.

Demand for manpower at all levels of skill in a developing economy remains unpredictable, except within very wide parameters. There also is a danger of becoming overly impressed with assumptions about the supply side of the equation. While one can calculate with fair accuracy the numbers of young people advancing through different educational and training institutions, for example, skill acquisition in the world of work is not readily amenable to such calculation. Such skill acquisition is frequently as important, or even more important, than that which occurs within the formal school system. Thus, questions of supply, demand, and their interrelations are indeed complex. To illustrate: If a large number of school graduates does not have an opportunity to become employed or to become employed in the areas in which they have been trained, they cease to be effective units of supply. Even in developing countries with a very small modern sector, the fact that an individual is trained in a particular discipline does not, of course, mean that he will remain in the area of his training.

Another aspect of this problem is educational qualification. Developing countries exhibit a pronounced tendency to rely upon an individual's educational qualifications as an index of what he is or is not able to accomplish. This, of course, is a very imperfect criterion, for it does not indicate directly the effectiveness of an individual in an actual work situation. Thus, calculations of educational output provide only very rough parameters of the nature of supply.

There are other difficulties of a more specific and technical nature. For example, even if the GNP calculation should prove to be reasonably accurate (which is not generally the case), it does not necessarily follow that the estimated GNP components correspond closely to what has in fact transpired within the economy. Unless the plan is actually effectuated in detail, therefore, it provides very little manpower guidance. To indicate, for example, that an additional 100 bachelor of science graduates are needed is not nearly as helpful as knowing that one might need 25 mechanical and 25 civil engineers, 25 agronomists, and 25 high school science teachers. Thus, many types of national plans have failed not only in terms of the general outcome being much different from that which was planned, but also in terms of the projected composition of that general outcome.

An alternative or more realistic approach to manpower planning is to emphasize the necessity of obtaining in-depth information about present and recent past experiences. With some effort, the recent past can be brought into some kind of meaningful evaluative framework. Such an approach allows the perception of very important clues to the location of tension points, stringencies, shortages, and lacks in terms of the present performance of the economy.

To begin with, most developing countries have a large rural sector which cannot be rapidly transformed. First, therefore, familiarity with the smaller and more manageable modern sector, which is generally undergoing considerable transformation, becomes essential. Learning about the experiences that employers are going through and have recently gone through in their attempts to locate competencies and skills for their expanding enterprises may provide a mirror for the analysis and diagnosis of manpower problems within the existing structure.

For example, countries such as Korea have relatively highly developed school systems even through the college level. Korea has recently been developing heavy chemical and fertilizer industries, electronics processing firms, and the like. The crucial question is whether the Korean educational system will provide the developing industries with the kind of scientifically-oriented people they need. These questions provide clues as to the merits of current educational practices as they relate to manpower needs. Another example is provided by the extent to which foreign managers and skilled personnel are employed within the existing structure to compensate for local managerial and skill shortages. Once again, such questions may shed some light on the availability of critical types of skills.

Indonesia provides an interesting case study. The foreign managerial groups were expelled so rapidly that the ultimate effect was no less than economic reversal. Although the desire for complete autonomy in managerial and industrial affairs was a perfectly reasonable political objective, Indonesia illustrates the dangers in equating political and economic objectives. Managerial competence, which is a question of time, training, and experience, cannot be provided "by edict." Indonesia provides another concrete example of how one may obtain very important insights into critical manpower needs by in-depth focus on present practice, thus providing much better clues concerning future needs than do academic exercises in planning offices.

Among the most serious misconceptions associated with most conventional manpower planning is viewing the formal educational system as the only medium for transforming the quality of manpower supply. Ethiopia provides an interesting contrast. To operate the power works, the railroads, the telecommunications systems, etc., these large quasi-governmental institutions developed their own in-service training programs. Such training programs may play an extremely important role in development of needed skills.

The military establishment may also serve as a valuable locus for skill development. I certainly do not advocate larger and larger armies but rather emphasize that a very considerable amount of skill acquisition may take place within the military, particularly when it is technologically advanced. The Korean War, for example, although destructive and unfortunate, did allow much skill acquisition by the military, primarily by incorporation of Koreans into the modern American army which develops skills. Compulsory military service since 1953 has made important training contributions to the needs of the Korean economy.

Another important factor frequently overlooked is experience. Human beings accumulate skills as a result of their own job experiences, particularly when there is some degree of occupational mobility. Obviously, the unskilled individual who works only at heavy labor at three different jobs has little or no opportunity for skill accumulation. Consider, on the other hand, a young man in Bangkok who gets a job as a hotel clerk because he has two years of high school. He may learn something about office management and, if he has capacity (especially a language aptitude), he is quite likely to move to a better hotel where he will be given greater responsibility and once again be in a valuable learning situation. From there, he may move to still another location and so on. This kind of skill acquisition is never utilized for manpower planning in conventional and more formal approaches.

There is yet another source for skill acquisition. If shortages of competent managers, foremen, technicians, etc. exist within the country, foreigners who are in possession of the needed skills may be extremely useful not only for operating the domestic institutions, but also to implement in-service training programs. The nationalistic desires of the new countries to control their own economies can be appreciated and understood. A reasonable policy in this respect would be to grant no work permits to foreigners without placing a training program liability upon them. This is another way of attempting a more realistic balance between political and nationalistic objectives and the realities of economics and manpower.

In addition to the factors concerning skill acquisition and utilization, there is also the very critical problem of the rural population which constitutes the bulk of the population of the developing nations and whose primary occupation is farming. Since major rural-urban transformations are long-term phenomena, the economic development of rural manpower becomes a challenging and critical aspect of any manpower strategy. Without such improvement, it is virtually impossible to develop a substantially agricultural country.

The last point is especially crucial. The first natural market is always the domestic market. If the vast majority of a nation's population remains so poor that it cannot buy within this market, development of the embryonic modern sector will be seriously hindered. The most sensible strategies for development, therefore, are those that assign high priority to the improvement of the quality of rural life, including the income of the rural population.

One of the most significant of related issues is the question of literacy. Lack of literacy is not necessarily lack of education, for illiteracy most often reflects the lack of formal education. To assume that illiterate people cannot learn and, therefore, they cannot efficiently participate in skill development is unwarranted and dangerous. The critical questions concern appropriate training techniques and motivational and incentive elements. Much more can be done in developing countries to elicit the active participation of the rural population in its own improvement. Most of these national governments simply do not have the necessary resources to transform the rural population by themselves. The key to rural development, therefore, is activating the rural people in their own self-government.

For example, to construct and operate a new village school, the government may offer part or all of the materials as well as one-half of the teacher's salary. The village, then, must provide the balance of the salary and construction labor. One of the most pressing rural problems is the lack of good roads to the larger centers and to the developing market. Some governments supply heavy equipment for cutting through the forest, after which the responsibility for the completion of the road rests with the local people. Consider also the potential value of a competent practical nurse in a rural health station who may function as an advisor to and teacher of local women with respect to such matters as diet improvement, sanitation measures, family planning, and the like.

These are inexpensive and imaginative uses of latent resources of the rural population to link it with the developing modern sector and integrate it into national development. The crucial issues are political, to mobilize the support and motivations of local leaders and chieftans.

One final point concerns the very important factors of manpower incentives, rewards, and other forces that result in one or another pattern of allocation. A great common error is to match rewards for work not with performance but rather with the degrees achieved in school. Although educational attainment sometimes provides a rough index for the determination of rewards, it is extremely important to obtain more objective readings about a man's worth in the world of work.

Another aspect is to get trained people into the countryside. People who have come to urban centers for education and the promise of a better life are not easily persuaded to return to rural areas. Since most developing countries assume primary responsibility for subsidizing the education of its young people, a reasonable policy might be for it to require the individual to work in the rural sector for a certain period of time in exchange for his educational subsidy. This is one way of getting required personnel such as physicians, teachers, etc., into the areas where they are badly needed.

Obviously, it is not possible to develop all new institutions simultaneously. It is most difficult to achieve an efficient government apparatus. A common hindrance is the wage level of the civil servants who frequently do not earn enough to make a living and often seek income from other sources. The most usual correlate is corruption throughout the governmental structure. Therefore, as difficult as it may be for the budget planners, it is essential to provide the civil servant with a living wage. The relevance of this point becomes magnified when one considers the extremely important role of the government in the development process. The bureaucracy that cannot afford to support itself is perhaps the Achilles Heel of many modernization efforts.

In conclusion, it is important to reemphasize the advantages of the alternative analytical approach to manpower problems that have been discussed. Essentially, it involves an in-depth knowledge of and focus upon the institutional structures and processes of society as they have recently operated and as they are currently operating to discover those vital points where adaptations, adjustments, and changes can most advantageously be made. The efficacy of such an approach is best appreciated when it is realized that effective and efficient manpower development involves no less than transformation of the basic societal institutions.

MANPOWER PLANNING FOR ECONOMIC DEVELOPMENT

S. Clifford Kelley

This presentation will focus on manpower planning as an element in the broader process of economic development. We will want to establish the link between the planning and the implementation of the program. The connection between development and human resources is important in this regard, and I would like to indicate here some considerations which bear on this relationship.

Economic Development, Human Resources, and Planning

There is a rather general agreement among economists that development involves changes in resource allocation, changes in the techniques and organization of economic activity, and changes in economic and social institutions, including cultural values. In this perception, the link between human resource development and economic development has locational, technical, and cultural dimensions. Reallocation of resources from one location to another is important for development of a total country. Technical change can be both in the mechanical and the organizational areas of the country. Cultural change refers basically to the values, norms, and attitudes which are necessary for any country to achieve economic development. A comprehensive manpower policy must treat each of these dimensions in the specific context in which development occurs and in relation to specific development goals.

The importance and the characteristics of each need is in some degree determined by the current economic and cultural context and the nature of the priorities among developing goals. For this reason, manpower policy must be an integral part of general development policy. This policy requires a strategy to adapt the development processes to the current capacities of the manpower stock, as well as the means to change these capacities.

Each of these considerations implies a commitment to manpower planning as a prerequisite to the formulation and implementation of a manpower or human resource policy. The basic decisions necessary to create and use the institutions which develop a manpower supply are long-term decisions. In the less developed economies, market institutions are rudimentary, and traditional values and role perceptions are often in conflict with the norms of market behavior. The development of market devices is not likely to be meaningful in the absence of general social and cultural change. Even under favorable institutional conditions, a market mechanism is not an efficient device for allocating a given manpower stock. It is clearly ineffective in predicting manpower requirements in the long term or in inducing an appropriate development of human resources. Manpower planning attempts to achieve this relevance between future human resources and resource requirements. The ultimate test of relevance is the achievement of prescribed economic objectives. Manpower planning is, therefore, more rational when these objectives are defined explicitly in the context of general development planning.

Elements of Manpower Planning

The Mediterranean Regional Project of the OECD was the first extensive attempt at planning human resource requirements in relation to national objectives for economic development in mixed economies. In this study, the problem of manpower requirements was treated independently from manpower supply. Existing manpower supply was evaluated in terms of the supply required to reach a given economic target. The initial (published) products of the national planning groups are, in general, long-term, aggregate, and preoccupied with high-level manpower, in particular, scientific and technical personnel. There was a focus on the technological relationships bewteen productivity and a skill mix and a neglect of problems of manpower utilization, mobility, adaptation, and the institutions related to those aspects of a manpower program. In this sense, the findings do not provide an adequate basis for the development of a comprehensive manpower policy or a universal model for manpower planning.

The scope and adequacy of the national plans were constrained by time, limited data, and a lack of supporting research in regard to relationships fundamental to planning. These remain, of course, conditions characteristic of the situation in which planning takes place.

Given these constraints, the elements of manpower planning as defined by the MRP experience involve explicitly or implicitly:

1. A projection of the economically active population over a specified period of time.

2. A projection of total employment, usually as a target rather than a forecast.

3. Projections of the distribution of employment by branches of economic activity as a derivative or partial determinant of output and productivity targets.

4. Projections of the occupational distribution of employment as a function of the technological and organizational determinants of productivity and explicit branch productivity targets.

5. The establishment of target qualification standards for specific occupations or groups of occupations. These are often established in terms of functional job requirements and vocational skills, but they can and should include sociological, psychological, or informational characteristics related to labor market behavior as well as job performance.

Together these procedures define the human resource requirements of a given set of development goals and development strategy. They define the minimal level of institutional development consistent with economic development objectives.

Projections of Manpower Supply

Projections of the methodological elements in assessing the current and future conditions of supply include:

1. A description of the present manpower stock in terms of employment status, occupation, and qualification.

2. A projection of this stock in terms of employment status through the planning period.

3. An analysis of the present capacity of the institutions which develop and deploy human resources to add to and modify the manpower stock in the planning period.

4. An analysis of the quantitative and qualitative changes required in these institutions to meet target manpower requirements and other social objectives.

5. The analysis of institutional change is, of course, the analytical basis for policy formation, program development and implementation in the areas of education, training, health, housing, and such labor market institutions as counseling, incentive systems, employment security, and informational flows.

Methodological Problems

In that there is limited knowledge in general and sparse data in particular, we do not have a complete knowledge of all the variables that affect labor participation. We know that changes in the educational system, in the family roles, and in income will have concomitant changes in labor force participation. However, the relationship between these variables is not at all clear.

Some of the principal problems of manpower planning in relation to these variables are:

1. The determinants of labor force participation rates and migration patterns.

2. The measure and definition of unemployment.

3. The determinants of sectoral productivity.

4. The determination of the technological relationship between an occupational mix and level of productivity, or a definition of complementarity between an occupational mix, a level of technology and labor productivity.

5. The definition of occupational qualification standards associated with a given level of job performance or aggregate productivity.

6. The definition of criteria for evaluating or projecting manpower utilization.

7. The definition of the relationship between worker and health, employability, and productivity.

8. The identification of the pedagogical, sociological, and economic determinants of efficiency in skill acquisition.

9. The determinants of the factors which affect cultural change and influence labor mobility and labor market performance.

10. (Given all of the above) The development of an analytic model capable of defining an optimal use of resources when optimization criteria include a full employment constraint.

These are problems of analysis resulting from inadequate data and basic research. All current planning techniques involve limited means of approximating or estimating these critical relationships, and the first requisite for methodological improvement is extensive research in these areas.

I would like to discuss a manpower planning project now going on in Ecuador and Bolivia. In these nations, we are attempting to offset some of the limitations of what has been done in other situations.

In manpower planning, a principal concern is the problem of moving from a given institutional situation to a new situation in a way that minimizes the social cost. Often, however, the planning procedure is directed toward defining a future condition and initiating a set of decisions to achieve that condition, but with very little regard for the process by which we move from the original stage to the ultimate goal.

In almost all developing countries, for example, the structure of the economy is such that you have a relatively small, modern sector and a very large, traditional sector, which is characterized both in industry and agriculture by many small and unproductive establishments. This being the case, a manpower policy designed along the lines of a capital program to raise aggregate productivity through factor substitution may very well do so at a great social cost to the small, low-productivity establishments that employ the bulk of the labor force. What happens to them? It is this problem, in particular, that we are sensitive to. The methodological decisions that we have made in Ecuador and Bolivia are largely directed at finding a way to develop a process of transition from the present to the future that will utilize the existing structure and carry it along, rather than eliminate it by attrition.

In Ecuador, we have very limited data. There are no time series data of any importance. Consequently, the approach that we are using is to examine the economy from a cross sectional view. From this approach, we are attempting to derive some dynamic measures that will permit us to make projections.

First, let us examine some data that are available. We have, for example, an agricultural farm household survey which gives data on land use, production, family size, education, and other economic and sociological data. Further, there is an economic census of mining, manufacturing, commerce, and services. What we can derive from the economic census is essentially a productivity measure, some estimate of capital consumption, estimates of capital-labor ratios, and estimates of the extent to which existing plant is being utilized. To supplement this, we have carried out a manpower survey in the mining, manufacturing, commerce, services, and public sectors. This survey has two elements. One is a sample establishment study in which we derived from each establishment a description of its present employment and the utilization and occupational structure of its work force. The second part is a sample survey of personnel in the establishments, describing the job of the individual, the training and education that he has had, and some elements of his work history--oriented towards questions of mobility and occupational change.

Fourth, we have a technological survey, a study of establishments in which we are trying to measure in some quantifiable way the technological level of the establishment, which we can then relate to the manpower structure and to the productivity and output data of this same establishment. Essentially, the survey has involved a work-process flow analysis of the establishment in which the work performed is divided into stages which are then described in terms of the degree of specialization of work, the level of mechanization involved, the type of capital equipment involved, etc. Its purpose is to permit us to evaluate particular capital investment data and factor proportion data as measures of the technological level.

From all these studies, we are able to define an establishment in terms of its capital intensity, productivity, utilization pattern, employment level, and the skill structure and nature of the functions within that establishment. We also are able to describe the qualification characteristics and something about the mobility attributes of the labor force as found in the establishments. We are, in essence, classifying establishments on the basis of productivity and then examining the characteristics of those establishments so classified.

As I have suggested, what concerns us is that we have to reach an output target, and that conventional economic theory would suggest we do so by expanding investment in the high productivity type of establishment. But since 80 percent of the labor force is employed in establishments that have very low levels of productivity, we have to make a choice somewhere as to where we compromise the employment objective with the output objective--that is, we must examine the cases in which capital intensity, let us say, will give us the largest payoff in terms of productivity with the least employment cost.

STATISTICS REQUIRED FOR A MANPOWER DEVELOPMENT PROGRAM

Evelyn R. Kay

Before moving into a discussion of the various types of statistics required for the development of a manpower program, one should consider briefly the major uses of manpower statistics and some sources of statistical information.

Generally speaking, there are six primary uses of manpower statistics. First of all, they are useful in evaluating the current manpower situation relative to national goals. Second, they are valuable in identifying existing manpower problems. Third, manpower statistics are the basis for estimating future manpower resources and requirements. Fourth, they are used to determine what educational and training facilities are needed to supply sufficient skilled manpower. Fifth, they assist in providing vocational guidance information to young people for planning their careers. Finally, manpower statistics aid in evaluating the degree to which national manpower goals are being realized.

The major source of statistical information is usually the national government. Manpower data may also be available through private industry, educational institutions, and administrative records. The availability of statistics from any of these major sources will, of course, vary from country to country. The less developed countries, in general, will have a great deal of difficulty in obtaining accurate statistics from many of these sources, a fact which severely handicaps the creation of a functional manpower development program. In this regard, it is recommended that high priority be given to gathering comprehensive and accurate statistical information about the working population on a current basis.

In the meantime, use must be made of whatever other statistical information is available. It should be remembered that statistics appear in many forms from a variety of sources. Thus, if one is persistent and imaginative enough, it is possible to accumulate significant amounts of useful statistics.[2]

Population Statistics

One of the richest sources of data necessary for manpower analysis is the population census. It not only provides a total count of people in a country but also the various economic and social characteristics of these people. Characteristics such as age and sex, educational attainment, occupation and industry in which employed, income, hours, etc., supplies essential information for studying past trends and for establishing benchmarks for projections of both the population and the labor force.

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[2] For a more detailed discussion of the sources of manpower statistics, refer to How To Make an Inventory of High Level and Skilled Manpower in Developing Countries, prepared by the United States Department of Labor, Bureau of Labor Statistics, for the Agency for International Development, Office of Labor Affairs, December, 1967.

Interim information on the population between census periods can be obtained through records of birth and death registrations. Vital statistics supply current data on the population which enables the analyst to refine his evaluation on past trends and to adjust his estimates of population projections.

Statistics on the movement of people from one place to another are another important aspect of population data. Migration statistics enable us to measure trends in the volume and nature of the inflow and outflow of the population. With regard to a manpower development program, it is of the utmost importance to understand causes of migration and how these trends apply specifically to the labor force. This is true for both international and internal migration.

Labor Force, Employment, and Unemployment Statistics

As indicated earlier, the census of population provides a benchmark, or total count, of the labor force as of the census period. To keep these data current between census periods, a sample survey of the labor force should be conducted at regular intervals, preferably quarterly or monthly. Data obtained from these surveys can provide information on the employment status of the work force. Additional information on the age, sex, earnings, and hours of work provides the necessary data for tracing and analyzing changes in the structure, participation, and quality of the labor force.

Information on the labor force is usually collected from a carefully selected sample of households. In the United States, the Bureau of the Census conducts a sample survey of about 52,500 households each month, at which time information is obtained on all household members age 16 and over.[3] The questions are concerned primarily with an individual's present working status (employed--not employed) and the characteristics of that status. If a person is employed, information is obtained about the type of job he holds, the number of hours he works, and the earnings he receives. Important information is also obtained on people who are not employed but who are looking for a job.

It is also important to anticipate the extent to which these facilities will be capable of meeting future needs. Throughout this discussion, we have emphasized the importance of developing statistical data which will enable us to recognize present and future imbalances in manpower supply. However, all of this is to no avail if the educational system is not capable of training adequate numbers of people to fill these gaps.

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[3] For a description of household surveys of the labor force, see Conducting a Labor Force Survey in Developing Countries, prepared by the United States Department of Labor, Bureau of Labor Statistics, for the Agency for International Development, Office of Labor Affairs, September, 1964.

Supplementary Statistics

In addition to the above major categories of statistics necessary for the analysis of manpower resources and requirements, certain related statistics may provide some insight on the economic and social conditions of workers. Many of these data are obtained as by-products of administrative processes.

It is helpful in formulating manpower policy to understand the impact of industrial disputes on the national economy. Data on man-hours as a result of work stoppages (strikes or lockouts) can provide clues as to their causes and effects on the work force, the industry, and the economy as a whole.

Industrial accidents and occupational illnesses also have a significant effect on the manpower picture. Man-days lost through these causes can erect a barrier to progress and development in important industries. Knowledge of the causes of injuries and illnesses provides background support for establishing accident-prevention programs.

Labor turnover statistics is a measurement of the gross movement of wage and salary workers into and out of employed status in industries. These data provide information on the commitment of the labor force and indicate wastage of labor as well as changes in employment opportunities.

Another statistic to which attention should be paid is the consumer price index. The index measures changes over time in prices paid by consumers for identical goods and services. Questions for national policy on the economic conditions of workers are influenced by the degree of change in the price index. These indexes are used also as deflators for translating actual money income into "real" wages.

The production index is another valuable source of supplementary information. This enables the analyst to measure changes in the productivity of labor and the effectiveness of capital outlay in various sectors of the economy.

The availability of housing statistics is also relevant to manpower planning. Such information makes possible the assessment of present and future housing needs in relation to the health and well-being of human resources. Housing data are also valuable for projecting the future manpower requirements of the construction industry.

Job openings and placement statistics provide a means of measuring the extent to which a given manpower development program is being translated into an effective stimulant of economic change. They are also a valuable means of communicating labor needs and evaluating the efficiency with which these needs are being met.

TECHNIQUES OF PROJECTING MANPOWER REQUIREMENTS

Evelyn R. Kay

There are a number of important assumptions which serve as a basis for the projection of manpower requirements. Basically, they concern stipulations of "ideal" conditions with respect to natural, political, and economic events during the period covered by the projection. First, it is assumed that there will be no major natural disasters, such as floods, earthquakes, and the like. Second, no major wars or international or internal political upheavals are anticipated. Third, with respect to economic conditions, the primary assumptions are that there will be no important national or international depressions,and that there will be full employment. Finally, it is assumed that there are clear developmental goals which are definitively expressed in a national development plan.

Projecting General Level of Economic Activity

Whether the national plan be on a 5-, 10-, or 15-year basis, the goals expressed therein constitute the first parameter for the projection of manpower requirements. A nation's human resources or supply of manpower provides the second parameter. Given the developmental goals of a national plan, therefore, the first step for the projection of manpower requirements consists of projecting the general level of economic activity to serve as a framework for industry projections. The gross national product (GNP) may be projected for the target years as follows:

1. Total labor force
2. less: Armed forces - equals
3. Civilian labor force
4. less: Unemployment - equals
5. Employed civilian workers
6. multiplied by: Average hours of work per year - equals
7. Total man-hours worked
8. multiplied by: Money value of output per man-hour - equals
9. Gross national product (GNP).

The gross national product calculated in this fashion should match the goals of the economic development plans. In the event that it does not, then certain adjustments are in order. For example, the average hours of work per year may be raised or lowered, the assumptions concerning unemployment levels may be modified, etc. In any event, assuming that the projected GNP is adequately matched with economic developmental goals, the next step involves the selection of a method, or methods, for the projection of manpower and occupational requirements for each industry.

Methods of Projecting Manpower Requirements--Advantages and Disadvantages

There are several approaches to estimating future requirements of manpower. Three major methods will be discussed.

1. Direct Inquiries to Employers. The first method involves interviewing representatives from each industry to determine their views relative to future prospects of their particular enterprises. It is assumed that the employer has intimate knowledge of the company's plans for expansion or change in activity and is, therefore, best qualified to judge how and where his industry is headed. However, this technique has certain drawbacks. Few employers devote time to making long-term projections and, thus, tend to make a hasty guess when asked about their future prospects. Granting the limitations of this method, whatever information that is supplied can provide guidelines for the analyst when used in conjunction with information obtained from other sources or developed from other techniques.

2. Extrapolation of Past Trends. The second method--the projection of quantitative trend lines into the future--has the merit of simplicity, but very little else to recommend it. This method implies a continuation into the future of the same complex of causative factors that affected employment in the past. However, manpower problems arise most acutely in situations which reflect a departure from past patterns. National welfare and safety, investment in educational programs, and human happiness are too dependent on sound planning based on good estimates of future manpower needs to permit us to base them on mechanical projections of past trends.

3. Analysis of Factors Affecting Demand. A third method for the projection of manpower requirements is considerably more difficult than those discussed so far. This method requires an analysis of the factors affecting the demand for workers in each occupation, the assessment of how these factors may operate in the future, and the development of projections based on judgment as to their combined effect on future requirements. This method requires greater resources, the collection of data, the development and training of experienced analysts, and the devotion of considerable time to study. It does not yield quick results, nor does it promise precisely accurate results since human judgment is involved. It does lend itself to a more realistic and reliable approach to the problems involved in projecting manpower requirements.

Steps in Projecting Demand for Occupations by Industry

The projection of demand for various occupations by industry generally proceeds according to the following steps:

1. Derive a rough first approximation of future employment by industry consistent with projected level of total employment. Customarily, this stage of the analysis is done by making separate first approximations for the major industrial groupings. The total for the combined major groups should equal the total number of employed civilian workers (step 5 in the calculation of the gross national product as outlined above).

2. Make a detailed analysis of each industry, taking into account anticipated changes in demand for its products or services, in hours of work, and in output per man-hour. This step involves the in-depth analysis of the data collected from government records, surveys, managers, labor unions, various associations, etc. There is no simple formula for determining the best techniques of analysis and interpretation for this stage of procedure. Much depends on judgment in analysis and interpretation.

3. Modify the first approximation of future employment in accordance with the results of the detailed analysis from step 2. In light of the detailed analysis of each industry, the first approximations for the various major industrial groupings should be modified.

4. Construct an occupational distribution of employment in each industry and project according to (a) the best available information or (b) experiences of other countries, paying particular attention to all occupations requiring specialized training or education. Employment data on the distribution of occupations in the various industries usually come from the census of industry or from surveys of establishments.

It is helpful for a country which lacks adequate occupational data to review the occupational patterns in other countries and to select one which could serve as a "model." Dr. Morris Horowitz and colleagues, for example, have recently published the results of an intensive study of the occupational distribution by industry for a number of nations representing various stages of development.[4] Certain modifications would have to be made, of course, but this method provides some basis in those situations where existing data and resources for occupational research allow little more than speculation. This technique was used by the Government of Puerto Rico; it was assumed that the nonagricultural economy of Puerto Rico in 1975 would have many of the same characteristics as that of the United States in 1950.

5. Estimate training requirements for each important occupation by analysis of the probable supply of qualified workers under existing training facilities in comparison with the requirements as indicated by occupational estimates for the future period.

Records of universities, vocational schools, and other educational and training institutions are the major sources of information on the anticipated output (supply) of people trained for various occupations. For purposes of projections, it is more meaningful to obtain data on specific occupations rather than on broad occupational groups.

An analysis of projected supply of qualified workers by occupation proceeds as follows:

1. Estimate current supply of qualified workers in each occupation, including others qualified for or capable of working in the occupation but who are not employed.

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[4] Morris A. Horowitz, et al., Manpower Requirements for Planning: An International Comparison Approach, Department of Economics, Northeastern University; Boston, Massachusetts, December, 1966.

2. Add inflows--the number of people who will be trained for the occupation during the projected period, including estimates of those transferring from other occupations, immigrants, and other sources of inflow.

3. Deduct outflows--the numbers of people who will retire, die, or transfer out of the occupation. One technique for estimating outflows is to develop tables of working life for the major occupations.

4. The results equal the potential supply of workers for each occupation in the target year.

Estimates of potential supply can be compared with estimates of requirements for each occupation to derive the anticipated shortage or surplus in that occupation. Such information provides the necessary basis for making adjustments to the educational and training system within the country.

Conclusion

In conclusion, it is important to reemphasize the fact that, although the more specific and detailed procedures for the projection of manpower requirements are generally rather explicit and readily available, there is no substitute for sound judgment in allowing the fullest realization of reliable and realistic manpower projection.

THE INTERNATIONAL COMPARISON METHOD FOR DETERMINING MANPOWER REQUIREMENTS

Morris A. Horowitz

I would like to describe the study that Northeastern University has been engaged in for the past several years. The study involves the derivation of certain occupational material from statistics of various countries in order to provide guidance for educational systems and other purposes to underdeveloped countries. This process was developed with a matrix which facilitates international occupational comparisons.

Limiting our comments to manpower planning, one of the first steps that must be taken is the establishment of future goals. Generally, these goals are cast in the framework of employment levels, by industrial sectors, and by occupation.

Determining the manpower requirements of a nation as of a specific target date is one of the more difficult aspects of manpower planning. There are various techniques that can be used to estimate the manpower requirements of the various sectors of the economy. Some are more reliable than others. Some are purely statistical in nature and require little more than projection of trends. Regardless of the technique used, determining the manpower requirement is still the most crucial aspect of manpower planning. What we attempted to do, therefore, was to develop a method of international occupational comparisons for manpower projections.

Until recently the principal criticism of the international comparison method was that the statistics were not readily available. This is no longer true. We now have available for 19 nations (and two points in time for seven of these nations) detailed occupational matrices cross-classified by industry using approximately 200 occupations and 50 different industries. These data were translated into percentages so that we had, in effect, a percentage distribution as well as a percentage occupational distribution for each of the 50 industries in 26 sets of data.

In many cases, the occupational classifications used by the individual countries varied significantly from the neighboring country and created a difficult job of adjusting the occupational listings. The three most difficult countries to adjust were the United States, Canada, and France. Most other countries use ISCO, which is the International Standard Classification of Occupations developed by the ILO. France has a completely different system of occupational classification while Canada, to a large degree, follows the American pattern.

The hypothesis we developed was that there is a direct relationship between the level of productivity of an industry and the occupational structure of an industry. With reference to any single country, such as Argentina, you might have industries A, B, C, D, and so on. Industry A might have a level of productivity measured in value added per employee of $1,500. Industry B might have $2,500; C might have only $500, and so on. If you take a single industry and examine this industry in different countries, you will find that when you go from a high-level productivity to a low-level productivity, the occupational structure of the industry changes in a rational way. What we did was to put all these data on IBM cards with which we ran calculations for tables by industry. The result was separate tables for 50 industries.

We examined the 50 different industries, the level of productivity of each country and the percentage distribution of employment in each industry by the 200 different occupations. We ran correlations of all the 26 points that we had in terms of countries. After examining them very carefully, a rather direct relationship between productivity and occupational structure was found.

The theory is that if a developing nation is interested in developing a particular industry with a specific level of productivity, it will be able to derive information about an appropriate occupational structure by referring to the structure in a nation with a productivity that is equal to the first nation's target.

Deriving a measure of productivity caused a great deal of difficulty. The only figure which we could use with some degree of reliability was value added per man-hour. But when we had to convert all the different monetary systems into a single system, such as dollars, we ran into the problem of the validity of the legal exchange rate.

A good deal of understanding and sophistication is necessary in order to use the statistics, but I believe that they can be used to make manpower projections, industry by industry, for the various occupations.

This does not solve the problem of estimating education requirements. There still remains the next step of translating these manpower needs to education. We did collect some statistics of occupational data cross-classified by level of education in each of the countries that furnished data. In some countries, the data were rather detailed and in others less so. These data gave us some indication of variations among countries. While there is some uniformity as to the educational standards of certain professions, this is not true when you talk of occupations such as technician or skilled craftsman. There have been no studies made that definitely establish minimum educational requirements for most jobs. Therefore, each country has to make its decision in terms of its own economic plan.

The technique that we developed at Northeastern University may help you find the statistics or data needed on manpower requirements within industries.

MANPOWER PLANNING: SOME CONTROVERSIAL ASPECTS

Eugene W. Burgess

If a single lesson is to be learned from manpower planning experiences, it is that manpower planning problems do not have either simple or absolute solutions. The numerous issues do not present themselves simply in black and white terms, but are most often so intricately interrelated as to appear as various shades of gray.

Manpower problems cannot be disassociated from the closely related and overlapping problems in educational, social, economic, political, and cultural development. Neither nations nor specific industries can neglect planning in a highly complex and rapidly changing world. Not many years ago, for example, the Standard Oil Company of California was well down on the oil producers' efficiency list. The realization of the company's inefficiency stirred its leaders into action. As a result of special and continuing planning efforts, the Standard Oil Company has become the most efficient oil company in the world.

Planning is indeed indispensable and must be made concrete. When Thailand was about to embark upon a very large-scale program of secondary education, responsible individuals became aware of the necessity of manpower planning. It was decided to investigate the extent to which the educational goals were consistent with manpower needs, thus revealing an enlightened appreciation of the interrelatedness of manpower and education. Too often the idea persists that development of manpower is independent of changes in education, economics, and politics. Unless co-ordinated with various educational and socio-economic goals, manpower planning cannot be especially effective.

Education assumes particular importance. First is the necessarily long-range nature of educational planning--generally 25 to 30 years. Second, due to its frequently larger budget and staff, the educational ministry or agency is often able to accomplish more than other planning agencies. Finally, and most obviously important, is its potential for generating individuals possessing needed skills.

Given the growing realization of the importance of formal education, however, there often exists the tendency to give little or no attention to the training needs of the current labor force. No country can afford to neglect its existing stock of manpower. Training efforts are essential not only for improving and enhancing existing skills and abilities, but also for making up for the inadequacies of the formal educational system in the development of skilled and competent workers.

The Tunisian experience illustrates the necessity and advantages of knowing the precise nature and effectiveness of training. Tunisian planners, with a Ford Foundation Grant, made a follow-up study of 1500 training center graduates for a period of five years after training. Of the training centers considered, only two (which were not part of the formal educational system) maintained constant contact or liaison with various industries. Their graduates secured employment with the industries immediately upon graduation. Such a program, although it is admittedly more demanding in time and money, can be extremely efficient and effective because of the heightened awareness of the needs of industry.

Among other rather significant problems is the problem of dropouts. They may remain uneducated and unemployed, or may go directly to trade or vocational schools where their successful acquisition of useful trades and skills is militated against by their lack of a basic education.

Another critical problem area is the nature of the courses in the formal educational system. Frequently, the formal school system does not produce individuals with the knowledge and skills vital for development. Classical or traditional education in humanities, law, and the arts often produces worker surpluses in non-critical areas.

Planners have also often reflected an insensitivity to the potential educational and training contributions of military establishments. Generally, today's armies are modern, both in technology and in organization. A modern military establishment can be an extremely useful arm of the educational system. The Peruvian military has equipped many of Peru's young men with a primary education. Although the role of the military in producing knowledge and skills adaptable to peacetime use cannot be ignored, the secrecy of military planners often hinders fruitful coordination with civilian planners.

In the societal and economic realms, pressing planning problems are numerous. Generally, the most ambitious planning efforts of most developing countries have been directed toward the industrial sector and urban unemployment problems. Needs of the rural-agricultural sector have received considerably less attention. The notion of rapid industrialization to expand the industrial base by withdrawing individuals from gainful employment in agriculture is highly suspect. In recognition of the questionable validity of this strategy, more and more developing nations are paying significantly greater attention to rural modernization needs.

Planners are becoming concerned with increasing agricultural production, with raising the rural standard of living, and with curbing rural-urban migration.

One of the Italian Olivetti typewriter company's primary plants was located in a rural section of Italy. To ensure that the workers would remain in that area, the company's president took special steps to make life around the plant competitive with urban living. One was to provide a busing service encompassing a 30 to 40 mile area around the plant. Television was introduced, and cultural centers were developed. Experiences such as these can provide useful clues as to how economic and sociocultural development can arrest rural-urban migration and transform the rural sector.

Another critical problem is the necessity of increasing food production, primarily as a result of the rapid population increases. Food importation is not necessarily an adequate solution. Imported food is generally exotic, frequently not very high in nutritional value, and generally accessible to only a small proportion of the population. The importation of large quantities of basic foodstuffs, high in nutritional value, for distribution among the bulk of the population, is relatively rare.

Other difficulties concern the most appropriate means for achieving rapid industrialization. Frequently, there has been a pronounced emphasis on developing import-substitution industries. Most such ventures have been little more than adventures. Thus, Tunisia, to decrease its dependence on foreign nations for processing and production of iron and steel, sought to develop its own steel plant. Lack of sufficient resources and technology resulted in a steel mill that was small, inefficient, and could not successfully compete with the imported product.

In Tunisia and other such countries, perhaps a more reasonable and practical approach would have been to undertake a modest development of local industry. All in all, the cases in which developing countries have been and are being led into false economic avenues of escape have been and continue to be too numerous.

Other problems have been associated with attempts to increase agricultural production. The adoption of the plantation system, for example, can produce great sociocultural shocks, while affecting little or no increase in employment. In many situations, such as Peru, for example, decisions must be made as to how to most efficiently implement limited arable land. How much should be used for the cultivation of export products, and how much should be devoted to the growing of foodstuffs for local consumption? Harmonizing agricultural economics with overall economic and social planning is admittedly not easy to answer. Increasing agricultural production, keeping markets in rural areas, and curbing the flow of rural manpower to the cities are crucial issues that planners cannot ignore.

Finally, is the acceptance and implementation of plans by the political authority. Carefully developed, clear, and concrete plans are not enough. Due consideration must be afforded to the question of power and authority for implementation. A number of individuals with primary responsibility for developing the plans also had significant political influence. They persuaded the Office of the President to issue appropriate directives. In addition, in the actual development of the plans, almost all of the economists in Tunisia were present, not so much to secure the advice of all of them, but to ensure that those who would be involved ultimately in the implementation would be thoroughly familiar with all of the aspects of the plan. Finally, planning offices were created in each of the relevant ministries to control the manner in which the plan was actualized. Throughout, planners never lost sight of the fact that manpower planning is part and parcel of the gamut of elements involved in economic development. They recognized the important interrelations among manpower, education, and social and economic development.

One aspect of the Tunisian plan is of particular interest. Because of the failure of the educational system to produce needed qualities and quantities of middle and high-level manpower, a Management Institute was created to strictly control employment at these levels. The control functions of this agency enabled the implementation of upgrading programs. Employing a system of examinations and special training, certain Class B personnel were moved into Class A, while there were also shifts from Class C to Class B. Simultaneously, the Management Institute controlled the flow of students to other countries for educational purposes. Quotas for various areas of study were set. Those selected were granted loans which, after their studies, had to be repaid over a ten-year period. To increase the channeling of competent individuals into teaching, those electing to teach were afforded a waiver of loan repayment.

The problems and issues already discussed emphasize that we are not yet at the stage of definitive and concrete solutions to manpower development problems. Further, they emphasize the need for planning with full awareness and appreciation of the interrelatedness of the many factors which, taken together, constitute basic and crucial elements for modernization.

PART IV

Manpower Strategy, Administration, and Institutions

101/102/103

STRATEGIES OF HUMAN RESOURCE DEVELOPMENT

Charles A. Myers

The Meaning of a Strategy of Human Resource Development

"Strategy of human resource development," refers to the development of a consistent set of policies to accomplish the following:

1. The establishment of priorities among different goals. Since it is virtually impossible to realize all economic, political, and social objectives immediately, assigning well-reasoned priorities becomes an important first step for developmental strategy.

2. The selection among alternative means for the realization of goals. Since any given objective may be capably realized by various means, which may or may not be equally efficacious, decisions concerning the most appropriate means assume central importance.

3. The recognition of the interdependence of the elements in a strategy of human resource development. The interrelatedness among the many aspects of human resource development emphasizes the need for a systems or equilibrium approach to recognize that actions with respect to one system element generally have concomitants and consequences with respect to other elements of the system.

4. The formulation of appropriate timing perspectives. A realistic and effective developmental strategy must take the time factor into account. The various goals or objectives may be possible on short, intermediate, or long-term bases.

The Appropriateness of Different Strategies

The appropriateness of different strategies depends upon the specific characteristics and pressures in each country or region of a country and its present level of human resource development.

Despite general common characteristics, each developing nation has its own peculiar problems, differing with respect to stage of development, the possession and utilization of natural and human resources, specific and general long- or short-run needs, and the like. Even within a country, wide regional variations often exist which underline the need for strategies which take full account of the peculiarities of individual contexts. Therefore, the human resource development strategist must ask himself:

1. What are the country's essential economic, political, and social structural factors that assume special relevance from a manpower point of view?

2. What is the precise nature of the formal educational system and the profile of enrollments for primary, vocational, secondary, and higher education?

3. How is employed manpower developed on the job? To what extent do employers provide training programs for increasing the skills and capacities that lead to occupational advancement?

4. What is the structure of incentives, particularly those relating to wages and salaries? Do they facilitate or retard the effective allocation of manpower?

5. What are the imperatives or pressures which face the country in its formulation of a human resource development strategy, e.g., pressures for increased agricultural output, rapid industrialization, family planning, mass education, etc.?

Critical Areas for Choice in Developing a Strategy of Human Resource Development

Guided by answers to these questions, policymakers are faced with critical areas of choice in formulating a developmental strategy:

1. Increasing the quantity or the quality of formal education at all levels. Often, pronounced emphasis on quantity may lead to neglect of programs for the advancement of the specialized skills crucial for development.

2. In secondary and especially in higher education, should priority be given to scientific and technical fields or to law, the humanities, and the arts? Although ultimately a well-balanced program would probably be the most desirable, a country in process of agricultural and industrial development must pay particular attention to the enrichment of scientific and technological fields. One of the problems is the relative costs of the respective areas of emphasis. Clearly, the development of scientific and technological facilities requires far greater capital outlays than do the humanities and arts. Under the pressure of increasing numbers of secondary school graduates clamoring for higher education, it is understandable, though regrettable, that policymakers in some countries have responded by expanding the less costly fields which contribute little or nothing toward the realization of developmental goals.

3. Formal skill training outside of particualr organizations or enterprises versus in-service training. Although special training schemes and institutions may meet particular needs, many individuals get their most valuable and in-depth training on the job. A person with an adequate and relatively broad educational background is generally more easily trained for a variety of positions than is one who has been narrowly channeled into a single occupation which may change or even disappear as a result of changes in technology.

4. Problems of wage and salary incentives. Are market forces sufficient to bring about changes in wage and salary structures to reflect the relative shortages and surpluses, or is intervention with such structures necessary?

5. Balancing the needs and interests of the state on the one hand with those of the individual on the other. Can the government direct graduates to certain fields in the interest of national development? Can the government impose restrictions on the movement of individuals to avert such phenomena as the "brain drain?" These kinds of questions are not easy to answer, and solutions become apparent only with careful consideration and weighing of the relative needs of the state versus the needs and desires of the individual.

6. The relative importance of agricultural versus industrial development at any given developmental stage. The new nations industrialized to achieve a higher per capita income and to accelerate economic independence. During the early periods, therefore, agricultural development was often deemphasized. More recently, however, many developing nations are realizing that agriculture is tremendously important for development, and will remain vital for a long time.

Closely related is the problem of keeping people in the rural areas to promote and maintain increased agricultural production. There are other critical areas of choice, but these six are indicative of the various kinds of policy alternatives that arise. It is important to emphasize recognizing the interdependence of the developmental factors about which choices must be made. These choices do not present themselves simply as either-or affairs. Rather what is required is a balancing among the various alternatives in "more or less" as opposed to categorical terms.

The Essential Components of Strategies Appropriate at Select Levels of Human Resource Development

The classification of 75 selected countries into four developmental levels on the Composite Index of Human Resource Development provides a useful device for formulating the general elements of developmental strategy.[1] It must be constantly remembered that these general elements and recommendations must be tempered by an appreciation for and knowledge of the particular imperatives, resources, objectives, and the like, which characterize each individual country.

Levels I and II[2] will illustrate the kinds of general elements of strategy applicable to nations at various stages of development.

Level I "Underdeveloped Countries"

The imperatives:

1. Major emphasis on the strengthening of political independence. This includes replacement of foreigners by nationals.

2. Expansion and improvement of the nation's natural resources.

3. Some expansion of secondary and higher education. This point assumes special significance in light of the first imperative; nationals must be sufficiently trained before they can replace foreigners.

4. Realization that at this developmental level the attainment of universal primary education is neither a practical nor a realistic goal.

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[1] Frederick Harbison and Charles A. Myers, Education, Manpower and Economic Growth: Strategies of Human Resource Development, McGraw-Hill Book Company; New York, 1964. See pp. 27- 29 of this report.

[2] Charles A. Myers, "Concepts and Levels of Human Resource Development," Lecture delivered at the Ninth International Manpower Seminar, Daily Proceedings No. 7, October 2, 1967. See p. 27 above.

Given the foregoing imperatives, the following represent vital elements of strategy.

Elements of strategy:

1. A schedule of localization of jobs held by foreigners. Policies which seek to replace all foreigners at once are questionable. The acquisition of skills for development is not instantaneous and may be facilitated by temporary retention of foreigners to train their replacements.

2. Programs, pressured by the government, for upgrading and training manpower in the private enterprise sector. This element emphasizes more systematic on-the-job training than that which customarily exists.

3. A compensation structure to reflect the different needs important in development. Politically, the formulation of such a structure will often be difficult but is becoming extremely important if incentives are to assist in allocation.

4. Secondary and higher education. At least initially, arrangements for sending students abroad for specific forms of higher education may be an integral part of educational development.

5. Teacher training. Obviously, the objectives concerning secondary and higher education require the training of qualified teachers.

6. The improvement of quality of education as opposed to expansion of quantity. The crucial development of high-level human resources suggests the pressure for quality education.

The general elements of strategy discussed are but a few applicable to the "underdeveloped" category. Their implementation must be always modified by the characteristics of the particular context.

Level II "Partially Developed Countries"

The imperatives:

1. Major emphasis on industrial as well as on agricultural development. These countries have moved somewhat beyond the first group in terms of economic growth. Their imperatives, therefore, are slightly different. Localization of jobs, for example, is generally no longer a problem. In many countries, however, there is often population pressure and mounting unemployment. Consequently, a primary imperative is greater industrialization.

2. Great expansion of secondary and higher education. At this level of development, with generally a greater commitment to universal primary education, the increasing numbers of primary school graduates exert very marked pressures for the expansion of secondary education. The increase in secondary school graduates, in turn, stimulates the furtherance of higher education.

Although other factors might be considered, these two should suffice to illustrate that the imperatives of Level II countries are indeed different from those of Level I. These differences are not in kind, however, but matters of relative emphasis.

Elements of strategy:

1. The expansion of technical instruction in higher education.

2. The improvement of the pay status of scientists, engineers, and agricultural technicians relative to other occupations.

3. The great increase in the numbers of a great variety of subprofessional personnel.

4. The expansion of secondary education. This element is crucial, not only for increasing educational opportunity, but also for qualifying individuals to become primary school teachers.

India, An Illustrative Example

India is a "semiadvanced" nation falling at the lower end of that class, and its particular experiences are illustrative of the need for clear perspectives concerning imperatives and concomitant strategies.

The most recent data reveal that over 50 percent of those in the age group 5 through 14 are in primary schools. But only 35 percent of those who start the first grade continue through the fifth, indicating an excessively high drop-out rate and a very wasteful form of education. Thus, the Indian experience should be remembered when considering universal primary education for a country.

At the secondary level, Indian education also exhibits aimless training programs geared either for university entrance or the performance of clerical jobs which may have been appropriate for the colonial era, but now are quite inappropriate.

Indian higher education is also plagued with critical difficulties. Of the 3.2 percent enrolled in higher education, only 27 percent receive science training. The remainder study the humanities, law, the arts, and commerce.

Indian educational problems are compounded by diversity of language. English is being replaced by the numerous regional languages. Clearly, a common language greatly facilitates realization of educational objectives.

The Indian educational problems are indicative of the developmental imperatives of many nations, and the need for enlightening and unambiguous perspectives concerning goals, decisions, and strategies for human resource development.

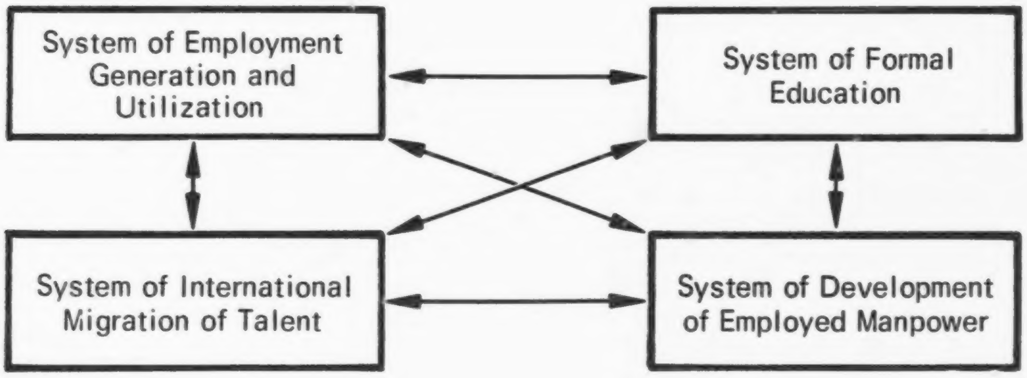
A SYSTEMS ANALYSIS APPROACH TO MANPOWER DEVELOPMENT

Frederick H. Harbison

This lecture presents a framework for orderly and systematic analysis of human resources to apply to almost any country. A system of human resource development and utilization is like an electrical power system; universities, schools and training institutions, and so forth, are generators, hooked up to various transmission lines, the lines of communication in the economy. Obviously, one of the most important aspects of any such system is that it be kept in balance.

Four basic sub-systems need to be taken into consideration. These are:

SYSTEMS OF HUMAN RESOURCE DEVELOPMENT AND UTILIZATION


System of Employment Generation and Utilization
System of Formal Education
System of International Migration of Talent
System of Development of Employed Manpower

The lines connecting the four sub-systems point out a fundamental requisite--the systems are highly interrelated and must interact efficiently to be effective. For example, the "System of Employment Generation and Utilization" has an impact on the "System of International Migration of Manpower," and vice versa. Likewise, there is a two-way relationship between the "System of Formal Education" and the "System of Employment Generation," and so on.

A systematic study of human resource development and utilization must consider the key elements in these four sectors, taking into account their mutual interdependence.

"Employment Generation and Utilization," has received considerable attention in previous lectures, and therefore, we need consider it only briefly. The important factors in this system are: the capacity of the economy to generate employment; rural-urban employment differentials; labor supply and demand at the various levels of skilled and unskilled employment; the existing structure of employment and unemployment; the machinery for matching supply and demand; and so on.

There are seven major aspects in considering the "System of Formal Education."

1. Outputs. It is important to understand the formal education system as a generating system. Information about the system's outputs at various levels should be readily available, and the future outputs should be projected.

2. Access. Who has access to the various levels of education? If universal primary education does not exist, what elements of the population are getting primary education? If there are very few rural schools, or if there is a fee-paying system of education, access is, of course, limited. As you go up the educational ladder to secondary and higher education, the issue of

access becomes even more significant. Is college entrance, for example, based on ability and merit, or such things as tribal membership, family connections, and wealth?

These considerations are particularly relevant to those countries which are in the early stages of development. Entirely objective analysis about the access permitted various population segments to formal education is extremely important.

3. Orientation. Often, orientation of the educational system is toward a single objective--almost entirely to preparing students for each successive level of education up to the universities, rather than being also technically oriented at specific points along the way. This situation exists in spite of the fact that often only five out of every 1,000 students entering primary school will eventually enter a university. It would seem the educational system is designed to produce failure, since it has relevance to only a minute percent of students who will continue through college. Therefore, a crucial question is whether education, the subject matter, textbooks, teaching, etc., are oriented towards a single objective or a multiple objective.

4. Management and Administration. Crucial also is procurement of highly-qualified people as ministers of education, educational inspectors, and above all, as school superintendents, or school managers. Essential, therefore, is an extensive evaluation of the people in these positions, as their ability is a crucial factor in success or failure.

The educational system's decision-making structure is also important. For example, is the management of the educational system focused in the ministry of education in the capital city, or is educational administration centered in the provinces, or at the local levels?

5. Teachers. Enumeration of teacher shortages and surpluses and estimates of the capacity of the economy to expand the number of teachers are vital factors. Often, the decision is made to expand primary, or even secondary education, without considering the ability of the economy to provide the additional number of teachers. My experience is that often it is much easier to get financial resources to expand educational facilities, than for the development of human resources, i.e., the teaching personnel needed to carry out the expansion. Thus, it would appear the constraining factor in many cases is human and not financial.

6. Flexibility. A very rigid and unchanging educational system is a liability to almost any country. On the other hand, an educational system sufficiently flexible to change in response to the political, economic and social needs of a country is an asset. However, any educational system soon tends to become bureaucratic in structure, and its outputs become overly standardized. Many educational systems become so rigid they are incapable of adopting or adapting new methods and technology.

7. Costs and Financing. In most countries, financial outlays for education are growing at a very rapid rate. In about half the developing countries, for example, they exceed the rate of expansion in the gross

national product. Thus, a constantly greater proportion of a country's financial resources are devoted each year to education.

It is generally not difficult to convince people more revenues are needed for education. In fact, political forces are such that many developing countries will probably devote too much of their resources to expanding education. Perhaps it would be better to increase the efficiency of the system that does exist, i.e., attain more good education for the money expended.

Costs of education can always be expected to rise. Once primary education is expanded, there is pressure to expand secondary and then higher education as well. Further, expansion at each successive higher stage of education entails considerably more investment per student.

With modernization, the student-teacher ratio is lowered, and specialized services for students such as counseling, remedial reading, and so forth, are introduced. It is very interesting to note that, in contrast to most other modernizing organizations, education is perhaps the most labor-intensive and, as it modernizes, it becomes even more so.

The cost of teachers in a less-developed country is much greater than the cost of teachers in advanced countries. In most African countries, for example, a primary school teacher's wages are approximately eight times national income per capita, but the primary school teacher's wage in the United States and western Europe is only two times the national income per capita, in spite of the fact that the educational preparation of the teacher in the less-developed countries is likely to be significantly less.

More training is often recommended to raise the quality of teachers. Yet, it should be kept in mind that with more training, they are quite rightly going to demand more pay. Thus, the total cost of suddenly raising the qualifications of teachers should be given careful consideration. Logically, a newly-developed country should employ far more advanced educational technology than even the advanced countries to make more efficient use of existing teacher supply.

These are some key factors in evaluating a given country's educational system. Such systematic analysis is essential to understand its present and future capabilities in meeting economic, political and social needs.

With respect to the third sub-system, "The System of Development of Employed Manpower," it is probably accurate to say that less than half the knowledge and skill an individual acquires in his lifetime is attained through pre-employment formal education. Much more knowledge and many more skills are obtained through experience and training during employment.

The frequent tendency to neglect or play down the on-the-job aspect of training is unfortunate in that the quickest way to increase productivity through skills development is by emphasizing on-the-job training. From a cost-benefit point of view, it probably pays to invest more in developing the skills of those already in the labor force, than in the younger people who will not be productive for some time to come.

Therefore, I advocate a thorough analysis of training in employment and an examination of the programs companies have established to upgrade the skills of their workers. An attempt should also be made to determine the extent of savings in formal education costs by putting more of the burden of vocational and skill training on the employment institutions. If the training burden was shifted to the public and private employing institutions, the overall efficiency of the system of human resource development and utilization might be greatly increased.

Finally, we turn to the "System of the International Migration of Talent." Most countries are both importers and exporters of talent. In African countries, for example, a great deal of talent was imported in the form of colonial administrators. Newly developing countries in general import large numbers of experts for all kinds of technical assistance. Indeed, many of these countries probably could not exist or grow if they were not able to import such talent.

At the same time, they export high-level manpower as local nationals are trained to take over their jobs. This, of course, is very much in line with the political and economic development programs in these countries.

Some newly-developed countries also export their own national talent. In Jamaica between 20 and 30 percent of all university graduates in medicine leave permanently in order to take better paying positions abroad. It is rather shocking to note that in the United States, approximately 17 percent of the new additions to the medical profession each year come from abroad. To the extent that these people have been trained in other countries, the United States receives a free gift of human talent which, in turn, is a total investment loss for their countries.

Such losses are a significant problem for any country, but particularly so for the newly developed countries whose supply of high-level manpower is already limited. A primary reason for this loss is the lack of an adequate system for employing these people in their own countries. Often, students pursuing advanced study in the United States do not want to return to their home countries, because there is no systematic way to assure them of appropriate jobs.

Another problem, particularly acute in the African countries, is that doctors educated abroad often receive training with little relevance to their home country's needs and conditions.

I have seen graduates from the Ibadan Medical School who refused to take jobs in Nigeria, simply because they were unwilling to work in the hospitals which existed in the rural areas. They had been trained to work only in the most advanced hospitals and seemed intent merely on a medical practice among the European and high-income native groups, which might lead to permanent migration to make a better living out of the country.

A thorough analysis of this crucial balance of talent should be an essential part of the overall plan for human resource development and utilization.

It is immediately apparent that the overall job of manpower development and utilization is an immense one. However, it is far more important to get some information on this whole constellation of factors, than simply to get a great deal of information on one little piece of the problem. The big failures in manpower planning have resulted from choosing this latter approach, failing to recognize that what we are dealing with is a system, and not merely a series of isolated components. A basic objective of manpower planning, therefore, should be to examine this entire system, determining in the process the extent to which balance exists among its various elements.

Although, in many ways this approach seems almost blindingly obvious, I know of no country which has employed it in human resource development and utilization.

INSTITUTIONS FOR THE FORMATION AND DEVELOPMENT OF HUMAN RESOURCES

John P. Walsh

The main objective of this lecture is to consider training resources, and the kinds of institutions that can be organized for training. We shall outline five of the basic types of training resources that can be made available, the types of training systems in both the public and private sectors, and finally, some of the major kinds of action and training programs essential to manpower training.

Training Resources

1. Private Business and Industry. Where this resource exists, it represents a ready-made facility for training, and it becomes the task of the government to set up incentives to stimulate the involvement of private business and industry in the task of training.

2. Public and Private Schools. The use of public schools in training is a common concern. However, private school facilities can also be valuable, since the public sector is rarely able to satisfy all training needs.

3. Public Agencies of the Government. Often, only the government is capable of organizing and standardizing training programs. It can also contribute much by ensuring suitable means for upgrading and updating the skills of its own employees.

4. Labor Organizations, Trade and Business Associations. Often, labor organizations and employer associations will train their workers. In some cases, labor organizations have established regular vocational training schools for the upgrading and updating of skills.

5. Military Establishment. The defense establishment, having the most advanced equipment, can therefore assume a great deal of responsibility for training its people. Since the skills these people learn are easily transferable to the domestic labor force, large gains can be realized if there is an efficient means of feeding them into home and industry once their military service has been completed.

Kinds of Training Systems: Public Sector

One system used for organizing training is the National Training Agency. The best examples are to be found in Central and South American countries, such as Brazil, Colombia, Argentina, and Peru, where this system originated. Most training agencies have come into existence through the support of an employer tax amounting to one percent of total payroll and invested in the development of a training program for that industry, which is for the most part independent of the government, but with functional contacts.

As the payroll tax is applied evenly to all employers, there is no competitive advantage. The employers have had no hesitation in paying the one percent tax, since the programs have paid off in significant dividends through the upgrading of skills. Furthermore, since the employers themselves have an investment in the program, their direct interest in the manner in which the program operates has often resulted in improving the training system.

Another type of training system is one organized through the Ministry of Labor or Ministry of Education. Which one assumes responsibility for vocational and technical training varies from country to country. The important task is coordination of training to assure long-run development in all necessary occupational categories. One primary concern is that the training provided be broad enough to enable individuals to have horizontal job mobility when technological advances obliterate or make obsolete certain occupations.

In sum, regardless of how the training systems are organized in the public sector, the major objective should be to attain the highest level and volume of training.

Kinds of Training Systems: Private Sector

Even the fullest use of the public sector is often not sufficient to meet all training needs. It is both necessary and desirable to move into the private sector. Two such systems are trade unions and private schools. Two of the many other systems are corporate training and correspondence schools.

The corporate training system is one operated by an establishment with a considerable number of employees, and which undertakes to meet the training needs of its employees. In many cases this can be similar to the institutional program. Thus, the company itself may establish a school. Common in the developed nations, it is taking hold in many of the developing nations as well.

Foreign corporations can also become involved in the training of local workers for jobs in their plants. Those engaged in manpower programs should such employers to promote the establishment or extension of this type of training.

Correspondence schools, for home study, are taking hold in many developing nations. A fundamental requisite is the ability to read and write. Therefore, training through correspondence cannot be successful unless there is a sound basic educational program.

In effect, we have been dealing with a series of programs. Some have been action-oriented. Others have been programs which support training activities.

Action Programs

Examples are vocational school programs which enable large numbers of people to obtain training, which would otherwise be unobtainable, and on-the-job training in which the individual is trained while actually involved in productive activity. The latter involves much smaller numbers of people; one skilled worker trains another, a learner, while both perform work on the job. In its more refined stages, on-the-job training takes on the form of the apprenticeship, a long-range program aimed at teaching an individual all of the skills of a given trade.

However, we often neglect combining each of these programs so that we use the school for part of the training and the industry for the other part. In the United States, this is referred to as cooperative training. First, an individual attains certain basic skills in the training center, and then he improves these skills on the job. Cooperative training programs and various innovations enable us to move more and more people through the training center. The amount of time that they have to be in the training center is reduced, because much of their training can be done on the job. In addition, employers take a more active interest in the programs of the school, thus contributing to its overall effectiveness.

Another type of training program is the industrial apprenticeship with two basic patterns. In Europe and South America, the employer commonly moves the entering apprentice right out into the apprentice school, which is operated by the industry.

In many other countries, the apprentice is given all of his training on the job site in the plant. For part of this time he goes to a public vocational school for related training, usually one day a week.

In the industry upgrading course, an individual is trained to increase his capability, take on higher levels of work, or keep up with technological advances. This type of program is extremely important to developing nations, where as the economy advances, more things have to be manufactured by new machines which the work-force must be trained to use.

Support Programs

The greatest need for support programs is in instructor training. No system of training is effective that lacks qualified instructors.

Another important support program is coordinator training. A coordinator is a liaison between the school and the industry, vitally linking training and practical application. Basically, he sees that what is learned in the school is applicable to the requirements of the job.

Development of instructional materials, another support program, is important in order to increase the overall efficiency of the training process, including materials with detailed drawings and diagrams to aid those with limited reading capabilities.

Support programs should include occupational analysis, that is, detailed studies of particular occupations for use in structuring or modification of training programs.

Finally, support programs with regard to recruitment, selection, and referment activities also help make the vital link between the individual with certain skills and the job requiring those skills.

APPROACHES TO EDUCATIONAL PLANNING

Herbert S. Parnes

During the past decade, increasing attention has been paid in both developing and "advanced" countries to the problem of ascertaining the level and type of educational investment required by targets for economic and social development. The purpose of this lecture is to explore what is meant by a nation's "educational needs" and to review and evaluate several approaches to ascertaining such needs that have either been used or suggested as a basis for educational planning. Before examining and evaluating each of these, I should like to set forth a few propositions for economic and social development that appear to me to be axiomatic but which, nevertheless, have great significance for an interpretation of the need of educational planning:

Proposition 1. Society's needs for education are distinct from an individual's need. This will be further elaborated under the heading of "social demand."

Proposition 2. Needs for education only have meaning in relation to goals and objectives of the society. The education planner gets his goals from the overall program.

Proposition 3. Individual and social objectives to which education is relevant are numerous and diverse. There is no unidimensional goal which education can point out and no single path for achieving goals. There may be economic, social and/or political goals.

Proposition 4. One role of education is to prepare people for the world of work. This is called the vocational role. A vocational role is not completely synonymous with an economic role. Education can contribute to the achievement of economic goals in ways that have nothing whatsoever to do with vocational preparation. For instance, the body of superstitions and the body of traditional attitudes in many developing countries constitutes a significant barrier to modernization and to economic development.

Education can contribute to the breaking down of these barriers. Then it can be seen as contributing to economic development in a way that has little to do with manpower as a productive input.

Proposition 5. Although education may be essential for the achievement of certain social goals, it by no means guarantees their achievement. This is so for several reasons: (a) with respect to some goals, education may be a necessary but not a sufficient condition; (b) a more substantial reason why education does not automatically result in the achievement of the goals is that much depends upon the character and quality of education.

Proposition 6. Formal education is only one medium of education. Other institutions can and will meet some of the needs for education in the society. Military, on-the-job training, apprenticeships in vocational training, the home, the church, and mass communication are all agents of education.

A synthesis of the several propositions stated above is that there is a substantial difference between educational planning on the one hand and manpower planning on the other. The best way, perhaps, of preceiving the relationship between educational planning and manpower or human resource planning is to conceive of these as intersecting circles.

Manpower Planning involves the human agents of production; that is, a concern for vocational preparation. It also involves a concern for promoting types of mobility to get people where they are needed and at the same time preventing types of mobility that constitute drains on manpower resources.

We can readily understand that manpower planning involves vocational preparation along with a set of additional criteria, among which is health planning because health obviously has a relationship to the productive efficiency of human resources.

Since one of the roles of education is to prepare people for the world of work, the educational planner is also interested in vocational preparation. This would then be the common area of the two circles. The educational planner, however, is concerned with a set of educational goals that do not necessarily have anything to do with manpower considerations or vocational preparation.

Approaches to the Assessment of Educational Needs

Social Demands. The simplest and the most conventional basis for decisions about what is "needed" in the way of education personnel, plant, and equipment is to anticipate the "demand" for education--i.e., the number of students who wish to enroll in the various levels and branches of the educational system. For the period of schooling that is compulsory, this requires only demographic projections by age. For that portion of the educational system beyond the minimum, it involves estimates of the proportions of the several age-sex groups that are likely to attend the various levels and branches of the educational system, based on past trends, anticipated economic and cultural changes, the income elasticity of demand for education, etc.

While much of current educational planning, particularly in economically advanced countries, is doubtless of this kind, "social demand" clearly does not provide a basis for ascertaining the society's needs for education. That there is no necessary equivalence between society's needs and the aggregate of individually perceived private needs is demonstrated by the prevalence of compulsory education laws. Moreover, there is a fatal circularity in this approach. It fails to recognize that the "demand" for education is not autonomous, but depends heavily on public educational policy, e.g., whether there are tuition fees, the availability of scholarships, etc. But the entire purpose of the analysis is to determine what public policy should be.

Although estimates of "social demand" cannot qualify as measures of a society's needs for education, they are nevertheless indispensable for ascertaining whether these needs, however ascertained, can be fulfilled within the context of existing inducements and private costs. They can indicate, in other words, whether the required numbers of individuals are likely to choose to avail themselves of the educational opportunities that are to be provided.

"Returns to Education." A number of market-oriented economists have suggested that an appropriate method of ascertaining whether a society is making the "proper" investment in education is by calculating the rate of return to this type of investment and comparing it with the returns on other types. In this conceptual framework, a higher rate of return on educational than on alternative types of investment is indicative of underinvestment in education. Or, if returns to primary education in a developing economy are higher than returns to secondary education, the conclusion would be that higher priority should be given to expansion of primary education. The optimum situation is one in which rates of return, at the margin, are equal for all types of investment.

The technique used for measuring return to education generally involves comparison of the lifetime earning of persons with various educational attainments (e.g., high school graduates versus college graduates) and expressing the difference as an annual percentage rate of return on the costs involved in obtaining the additional education, including all relevant social costs.

This approach is appealing because it appears to measure the social benefits of education in a single figure, but it suffers from a number of conceptual and practical difficulties that severely limit its usefulness as a planning technique. For one thing, the "return to education" approach does not measure the non-economic benefits of education to society. Secondly, it even ignores the economic benefits that are not reflected in differential earnings between the "less-well" and the "better" educated. Third, the approach assumes that average differences in income among groups with different amounts of education are attributable solely to the differences in education, ignoring the intercorrelations between education and other factors that may be expected to have independent effects on income. And finally, the rationale of the approach rests on the assumption, which is at least questionable, that differentials in earnings reflect differences in contributions to the social product.

Econometric Models. Attempts have been made to express, in terms of mathematical models, the relationship between target rates of economic growth and educational requirements. Professor Jan Tinbergen and his associates have developed a model designed to shed light on the educational structure required in order to achieve a given rate of economic growth. The model postulates proportional relationships between the volume of production on the one hand and the number of persons in the labor force with secondary and higher educations on the other.[3] In my opinion, the chief limitation of the model is its basic assumption that the correlation between the educational structure of the labor force and the volume of output means that the former is a necessary condition for the latter. It may well be that the causal relationship, at least in part, is the reverse of the one postulated. Moreover, aside from differentiating *levels* of education, the model says nothing about the appropriate structure in terms of *types* of education. Finally, the Tinbergen model does not concern itself with any of the non-economic criteria for assessing educational needs.

ESSENTIAL ELEMENTS IN EFFECTIVE TRAINING PROGRAMS IN DEVELOPING COUNTRIES FOR INDUSTRY, AGRICULTURE AND SERVICES

John P. Walsh

As framework for manpower training programs, several types of supporting data are assumed: (1) *Economic development plan*. Definitive social, economic and political developmental goals provide direction for formulation of training strategies. (2) *Industry-occupation projections*. It is then necessary to identify the industries instrumental for the realization of those goals. Further, it must be possible to identify the specific occupations and degrees of occupational competence by industry which must be developed. (3) *Manpower requirements analysis*. Determinating what kinds of individuals and what kinds of skills are needed becomes appropriate next. (4) *Human resources analysis*. Competencies and skills must be built on human resources. It is pertinent, therefore, to learn the present status of these skills and competencies. (5) *Education and training resources study*. It then becomes important to study the education and training resources, their current capabilities and their potential for future expansion. (6) *Manpower development goals*.

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[3] Source. "Econometric Models of Education" - OECD, 1965, pp. 9-12.

Formulation of manpower development goals finally becomes possible. These supporting data allow the manpower specialists to plan the general strategy for manpower development.

Occupational Competence

Five major factors contribute to development of occupational competence. All must be considered in any training system or program. The most important factor is the instructor, who will do the guiding and leading. Thus, first must be the generation of the system or systems for developing the instructors. Second, a clearly formulated training plan is crucial. Since learning by trial and error can be extremely inefficient and costly, there are pronounced advantages of instructional plans providing an orderly and progressive learning process. Third, instructional material, is the medium for increasing training efficiency. Fourth, whether it be a school, training room in a factory, production line, etc., an adequate training facility is required. Finally, training equipment must be such as to facilitate the necessary transfer to the actual work situation. Pronounced benefits generally accrue when the training programs use the same equipment as in production.

Although all five factors are necessary, the particular skill to be taught or developed will condition their relative emphasis.

Developing Instructors

Three elements are involved in developing instructional personnel. First, a basic general education provides the instructor with essential communication skills. Regardless of his occupational skill an individual will not be an effective teacher unless he communicates these skills to trainees. The second element is skill field preparation. An instructor must himself possess an adequate background in the field that he is going to teach. Finally, an instructor must know how to teach and therefore, receive instructor training.

Obviously, the varying emphasis placed upon these elements depends upon the skills to be taught as well as the knowledge and skill of the instructors. Given an adequate general education and skill field preparation, for example, an instructor may be developed rather quickly with relatively brief training in how to teach.

Elements of the Training Plan

Training plans for enhancing occupational competence must provide for basic education, practical occupational instruction, and related technical education, regardless of the specific occupation. The amount of effort to be expended for the development of the three elements may vary with the specific occupation. In the training of a semiskilled machine operator, the training would be geared primarily toward practical occupational instruction. The training of technicians, on the other hand, would most likely necessitate specific technical and, perhaps, basic education. The training plan must be generated specifically for the occupation and the skill level desired.

The Skill Ladder

Four major skill categories form a skill ladder: unskilled and semiskilled, semiskilled and skilled, semiprofessional and technical, and professional and technical occupations.

The overlapping between the various categories becomes significant for upgrading skills, for a focus upon them allows a more efficient cultivation or development of already available skills. For example, training programs may be developed to transform certain semiskilled to skilled workers, skilled workers to technicians, and the like. The most efficient training strategies encompass not only long-run training objectives, but also more immediate training programs for upgrading skills that are already available. Upgrading develops higher levels of manpower in less time.

Any given job level is a balance between skill or "know-how," and knowledge or "know-why." For example, whereas the know-how is the primary requirement for the semiskilled, the skill dimension is greatly minimized for the scientist and engineer, and the know-why plays the crucial role.

Decisions to be Made

The formulation of appropriate training programs necessitates a number of critical decisions:

1. What to train for? What are the occupational categories? How many individuals will be needed in each?

2. Who should be trained? What are the educational and skill requirements prerequisite to the training programs?

3. Where will the training take place? Answers to this question entail awareness of the financial resources available for training. While certain competencies can be best developed in a school situation, others may be more efficiently and economically generated in industrial or business establishments.

4. Who will do the training? Unfortunate and frequent are unrealistic educational requirements for instructors. For example, often only graduate engineers are considered qualified to train machine operators. But often they display reluctance to getting their hands dirty. Clearly, training machine operators is more efficient when actual manipulation is involved. Sole reliance on lecture and discussion techniques wastes time, money, and manpower. Thus, at the skilled and semiskilled levels perhaps the most efficient trainer is that individual who has demonstrated job performance skill as well as teaching potential.

5. What is the training plan? There is no single universal training plan. Training plans should be tailored to particular occupations and skill levels. Overtraining, for example, is as inefficient and uneconomical as undertraining.

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6. Where are the training materials? Appropriate training materials matched to job level increase the instructor's effectiveness and reduce training time. Consider the wastefulness of upgrading the semiskilled by using a sophisticated and highly technical engineering text which cannot be understood without college training.

7. What training facilities are needed? Is the training to take place within or outside of the industries or enterprises? What are the relative advantages and disadvantages?

8. What equipment is needed? The answers are related to those concerning training facilities. If the decision is to train within the industry or establishment, for example, the use of actual production equipment becomes possible.

9. What financial resources are available? The answer will obviously greatly influence the other decisions to be made.

These questions admit of neither single nor simple answers. Decisions concerning the most efficient and least expensive training programs must be made with a full awareness and appreciation of the particular developmental needs and circumstances of a given nation.

AGRICULTURE IN TRANSITIONAL OR TRADITIONAL SOCIETIES

Garland P. Wood

It is clear that most of the production needed up to the year 2000 will have to come from land now in use. The idea that land reclamation might furnish the production necessary to meet the increasing food and fiber needs of these nations is not well founded, as shown by experiments in India, Russia, Latin America, and Africa. T. W. Schultz, in Economic Crises in World Agriculture states that experience indicates the wisdom of investing in lands already under cultivation instead of investing in land reclamation.

Since rural regions will have to absorb about 40 percent more population through the year 2000, cooperative arrangements on large tracts of land might prove quite workable. Under the cooperative system, the peasants might have private ownership rights to certain areas of land, and at the same time could cooperate in terms of large-scale production with efficient machines. For some types of agriculture there are definite economies of scale--sugar cane, for example--and the small farmer's organizing the production demanded by such economies is simply impossible. It is in such situations that a cooperative organization might prove quite successful.

Experiments in cooperative farming by countries such as Israel, Puerto Rico, Nigeria, and Colombia might provide useful information for those nations considering the establishing of such organizations for the first time. It is up to all of us to make the results of cooperative experiments readily available, in order to allow others to take advantage of these experiences.

In this presentation I would like to emphasize ways in which we can help agriculture be more productive. We will also look at the question of how to aid those migrating to the city so that they can be economic assets instead of burdens. Third, I will talk about why it is your duty as a citizen to stimulate democratic government on the local level.

I wish to briefly discuss the institutions formed by people to facilitate goal achievement in the rural sector. Such institutions in American history have been underestimated in regard to their contribution to the development of our agricultural system. The American frontiersman depended on numerous organizations for protective and educational purposes, and for the provision of services such as home and road construction. He was able to furnish for himself many of the services still lacking in the rural areas of today's developing nations. What I suggest here is that we might very well tap similar energies, stimulate similar motivation in the rural areas of the developing countries by allowing and encouraging the farmer's participation in similar organizations.

If rural government is to be stimulated it must have the power to tax and decide how tax revenues should be spent. An important reason for rural authorities not having this power is the experience of many Latin American countries with experiments in granting greater local autonomy--experience in which the local authorities abused their power to the extent of jeopardizing the cohesiveness of their new nations. This led to a return to centralized power. The cost of this recentralization has been high, and I suggest that the developing nations look again at the possible advantages to, and methods of, redistribution of authority. To make such a redistribution will not be easy. It is never easy to make changes that affect the present power structure.

Principles of Institutional Organizations

Rural organizations, such as the police force, public health units, or agricultural extension services, do not differ in *kind* of structure, but only in *degree*. They all manifest certain administrative organizational patterns.

1. All organizations have a pyramidal structure due to the limited number of people the individuals at the top can effectively supervise. The number a person can supervise will vary with the complexity of the organization's tasks, with communication patterns, with the size and area of distribution of the organization's operations; but the pyramidal pattern is usually that in which decisions tend to be made.

2. An effective organization is one in which it is realized that institutional motivations and structure must vary with variations in culture. To be successful, leaders must not ignore the training, customs, achievement motives, work discipline, or particular skills of the people who will comprise their organizations.

3. Within a successful organization there has to be some vehicle for channeling recommendations back to the top from the personnel actually implementing the programs. And there must be some means of resolving conflict, both within the organization, and between the organization and the clientele it serves.

It is in regard to this point that we see especially glaring breakdowns in highly centralized systems. Most of the developing nations follow the French-styled centralistic pattern, and, thus suffer from serious problems, because an official who fails to rely on local decisionmaking cannot possibly handle the great range of problems found at the local level. It is up to us concerned with agriculture to find ways of structuring government in which local problems are resolved by local authorities, and yet which ensure the feed-back of information needed to guide future policy decisions.

4. A successful organization must have strong leadership. Too often leadership in the rural areas of developing countries has been weak and uninformed, largely because agriculturalists generally do not attain important political positions. The educational channel precludes such movement. Therefore, agriculture is represented in the upper governmental strata by urban-oriented people, who are usually "romantically" concerned with agriculture, but have little real knowledge of rural problems. The farmer is quite often a better economist than the government official who tells him what to do.

T. W. Schultz states that agriculture has not progressed in the developing economies because the farmer has not had access to recent research and has had his prices held down by government action, while he has paid exorbitant prices for his fertilizers and other inputs. In India, for example, the cost of fertilizer is 3.5 times that sold in Japan, while the government keeps crop prices low. This example shows clearly why agriculture often is not more productive and why those who determine agricultural policy must be those who understand the farmer's problems.

Another excellent reason for improving the quality of leadership in the agricultural sector of developing countries is that, due to frustration in the political sphere, various rural groups have turned to violence in order to achieve their objectives. Unless these countries soon improve living conditions in rural areas, the people of these areas will increasingly resort to rebellion to achieve their goals, aided by revolution-oriented agents--frequently foreign-trained.

Fred Riggs, in his book, Administration in Developing Countries: the Theory of Prismatic Society, postulates that in developing countries we find informal work relationships which have operated for centuries. He states that within the past 50 years due to the pressures from the industrialized nations, new organizational structures have been established in many of these countries--including agricultural extension systems, experimental stations, and governmental organizations. Although many of these organizations are strikingly similar to those of Western Europe or the United States, a large number are ineffective, he believes, because of their failure to adapt to the cultures in which they are operating. Thus, a great deal of work is still channeled through the informal structures. This is a reminder to us that we will be misled if we see the new institutions as those upon which a nation's development depends entirely.

VOCATIONAL EDUCATION IN THE AGRICULTURAL SECTOR

Webster A. Tenney

I would like to outline various steps that can be taken to launch and improve vocational education in agriculture. It is useful to begin by clearly setting out the purposes of programs that are to be undertaken. Thus, the programs may train the farmer for production by helping him understand the latest practices; they may prepare him for work in agri-business; they may provide training in leadership to give an effective voice to the farmer; they may give the farmer training in management, which is becoming increasingly important as the farms get larger; and, finally, these programs may provide for financing in agriculture.

A second step is to develop a blueprint for a plan of action. To do this, we must first determine what has already been done, in order to ascertain what remains to be done in order to attain the stated objectives.

Next, a decision must be reached as to who will administer the program. Should we, for example, include agricultural education as a part of the existing (public) school system, or should we develop separate schools? The answer to this, of course, depends somewhat on the characteristics of the school systems in your particular countries. In any event, once this decision is made, we must then consider the grade level and age of the students involved. This information is necessary, for where the students tend to leave school at an early age, it is important that we start instructing them in our programs very early. How long should the courses take? This, of course, depends on the program; in the United States, for instance, courses vary from one to four years.

Clearly, it is important that we have adequate facilities in which to conduct vocational education in agriculture. But even more important is the problem of teacher education: How can we get a sufficient number of teachers in agricultural education?

When we start to teach agriculture, just what are we going to teach? Primarily, we want to make available the latest practices and products, and in the United States we usually get this information from commercial concerns. In terms of the teaching process itself, there is an excellent opportunity to instruct if the student is fortunate enough to be able to live on the home farm while in school, thereby combining educational theory and practice. Along the same lines, some students may be able to get occupational experience by going to school and working part time.

Turning to another step in our program, we have found it fruitful to maintain a close cooperation with agricultural organizations such as the 4-H Club and the Future Farmers of America. These groups provide training and leadership which help to motivate and instill pride in the farmers of tomorrow.

What results can we expect from a good agricultural education program for youths and adults? For one thing, we can expect a more efficient agricultural sector, with better farmers who are proud of their occupation, who earn more for themselves, and who contribute more to the economy. And we can help improve the position of agriculture in the developing nations of the world.

THE PUBLIC EMPLOYMENT SERVICE

Louis Levine

In agencies that deal with manpower problems, all too often the goals and objectives of a program are not linked with the actual implementation of the program. Quite frequently the goals are either too obscure to have practical application, or people become so concerned with the mechanical aspects of carrying out a plan that the objectives of the plan are lost.

The Public Employment Service attempts to link goals and actual performance in the arena of manpower problems. This agency is one of the major centers in which employment problems are analyzed and remedial programs begun. It deals with job and labor market concepts and in general with human resource problems. The Service is more and more connected with other institutional areas such as education, training, and health. Thus, the link between the objective of a better economy and the techniques of providing skilled manpower are drawn together.

In any planning and implementation agency, one of the first concerns is the accurate identification of the problem. Information relating to the problem should then be gathered and studied. However, this is only the beginning. Too often the information is filed away and collects dust rather than being used for the ultimate realization of objectives. One of the major reasons for this inadequate use of information is the lack of communication between the professionals who accumulate the data and the non-technically trained administrators who make decisions as to how problems should be worked out. There is a great need for mutual understanding between these two types of people in any agency.

Launching a program into action, once a plan has been formulated, requires knowledge of what kinds of manpower are available and what resources there are at your command. It is most difficult to form a general plan because different parts of the country and different elements of the population may be involved. It makes a difference whether the population is young or old, urban or rural, advanced economically or underdeveloped. It becomes an increasingly difficult problem to know just what aspect of the program should be undertaken first.

Up to this point, we have been talking in rather general terms concerning plans and implementation techniques. To be more specific and to focus on one agency, we pose the following question: What is the role and function of an employment service?

Historically, the answer to this question was that the Employment Service in the United States acted as a labor exchange. It found jobs for people who were looking for work and also found employees for jobs that were available. Its main purpose was one of matching men with positions. However, it is now believed that this role is much too narrow and that the Employment Service should not limit itself to the day-to-day situations of employment. Instead, the service is more and more being conceived of as a labor market institution. That is, it is concerned with long-range considerations such as preparation and development of workers who can adapt to an ever-changing economic situation. The orientation is more and more toward the total labor market, on supply and demand and the changes that take place therein. This broader framework necessitates a closer relationship with other training and educational institutions in the society. The wider scope takes into account changing technology and the resulting need for new kinds of labor skills.

In our Employment Service offices around the country, there are some which are still labor exchanges and there are those which are becoming labor market institutions. There are perhaps a few which are progressing to a third stage of development where the service agency could be accurately called a manpower agency. In such an organization, placement and labor market supply and demand are just two functions of an overall program which is concerned primarily with long-term goals and objectives of the economy. The emphasis is on planning for a generation hence, for 20 or more years into the future. In general, such an agency has a greater range of interest, a broader manpower perspective. This type of an institution takes a career approach in developing talents, not just a way of finding day to day employment for people.

During the past six years, the United States has been undergoing a manpower revolution. There has been more legislation passed on economic, social, and cultural problems than ever before in our history. Currently, there is a greater emphasis placed on granting the poor, the uneducated, and the culturally deprived people a more significant role in the economic affluence of our country. Given such priorities, the tasks of the Employment Service become not only those of placement, but also those of training, educating, and developing. In short, the Employment Service offices become manpower agencies. In such groups, the importance of time and personalized service are recognized as being crucial when dealing with the disadvantaged members of society.

In conclusion, we must say that such a program is an on-going concern. For example, education does not end when a job is obtained. The very idea as to just what constitutes a job is changing in terms of definition. More and more, positions are becoming mental exertions rather than physical ones. Thus, the people who fill such jobs must also change. Our society is rapidly becoming service oriented and the kinds of traditional meanings attached to the word job are no longer applicable in such a society. Given this situation, those who are employed are as much a concern of a manpower agency as those who are unemployed. This type of an agency is involved with every human resource and with the maximum utilization of the available potential.

ACTIVE MANPOWER AND EMPLOYMENT POLICY: MATCHING LABOR SUPPLY AND DEMAND; LABOR UTILIZATION AND WELFARE; PLANNING AND COORDINATION

Burnie Merson

Matching Labor Supply and Labor Demand

An active manpower and employment policy includes measures to form a qualified labor force and influence the overall level of employment, as well as mechanisms to effectively match job seekers with jobs. Mechanisms to promote purposeful occupational, industrial, geographic and establishment labor force mobility are essential. Specific policies and programs must give due regard to the level of economic development and the institutional background which may vary from country to country and to the consequent differences in appropriate priorities.

Economic growth and social progress inevitably result in some mismatching of labor supply and demand: (1) new skills are needed and old ones become obsolete; (2) new industries and firms appear and expand while old ones decline; (3) job opportunities multiply in one region and disappear in another; (4) urban growth expands the need for government services; (5) improvement in agricultural technology alters the pattern of demand for labor; (6) advances in health and education call for different occupational staffing patterns.

The more the economic changes, the greater the flux of labor markets. Too often the changes create worker dislocation, joblessness, and unfilled job openings. These can be minimized substantially by improving the labor market machinery for anticipating and aiding needed adjustments.

The view that in the long run man-job matches will occur unassisted overlooks the difference between an efficient and an inefficient labor market. Specific labor shortages can slow up economic expansion and raise costs and prices. Increasing the time required to place the right man in the right job decreases the output of goods and services.

An efficient job market, therefore, strengthens a nation's productive capability, without risking inflation, helps workers displaced by technological change, and guides new workers to job opportunities.

The unemployment pool caused by structural unemployment can be reduced by: (1) occupational training and retraining; (2) improving the flow of information about manpower requirements, resources and job opportunities; (3) facilitating the movement of displaced workers from places where jobs are scarce to places where workers are scarce; (4) reducing discriminatory hiring practices; (5) providing job testing and counseling services for those requiring special assistance to compete in the job market; (6) research in the functioning of labor markets; (7) encouraging employers, including public officials, seeking scarce skills to adapt jobs to fit abilities and to redefine jobs to utilize more of the unskilled and semiskilled; (8) promoting the employment of the physically and psychologically handicapped; (9) selective emigration, reduction of the "brain drain," and repatriation of nationals and school graduates; (10) filling jobs better and more quickly by means of recruitment and placement services, within and between labor market areas, available to all workers and all employers; (11) helping migrants, particularly migratory farm labor and rural to urban migrants, to adjust to a work life in a different environment; (12) priority allocation of key members of the labor force when needed to overcome development bottlenecks due to manpower shortages.

Labor force participation rates, average hours worked, and output per man-hour input are key factors affecting per capita production. Therefore, policies which expand the working population in relation to the total population, which provide productive job opportunities to all in the labor force, which bring men and jobs together and which increase the productivity of the employed worker all are involved in raising per capita incomes in developing countries.

Labor Utilization and Welfare

Another side of our manpower and employment structure contains two discreet and yet interrelated aspects: (1) the labor force as a factor of production; and (2) the fact that the dignity and welfare of members of the labor force and their families are end purposes of all economic activity.

Full employment is an incomplete objective unless the employment is productive. The essence of economic growth is increased output through work of goods and services that are wanted. In general, putting more people into employment should increase current output.

Higher productivity, one of the keys to economic growth, is the joint product of rising inputs of manpower and physical capital, and increased efficiency of these inputs as a result of improving quality of the work force, advances in technology and economies of scale.

One role of an active manpower and employment policy is, while safeguarding the wage earner against exploitation, to seek and promote ways and means of increasing worker productivity. Success largely depends on whether higher national income and output results.

Some manpower measures which improve the productive efficiency of the worker after entry on the job are: (1) good labor-management relations; (2) sound personnel systems; (3) training-conscious supervisors; (4) nondiscriminatory job assignment and promotion practices; (5) reduction of absenteeism and featherbedding; (6) organization and methods analysis; (7) realistic education and training standards for filling vacant positions; (8) good management of human and physical capital; (9) tapping, by means of suggestion systems and joint worker-management conferences, the unutilized capacities of personnel at all administrative levels; (10) decent working conditions; and (11) supplementing worker knowledge and skills with measures to satisfy his social and psychological needs.

The worker is more than a factor of production. He does not exist solely to support an economic system but, rather, goods and services are produced for his welfare. Thus, employment and output are not objectives in themselves but means to other ends.

Dragooning people into employment without pay or at bare subsistence rates is a temptation to hard pressed governments. Alternatives are absolutely necessary. An active manpower and employment policy should include appropriate measures for: (1) effective labor laws covering child labor, maximum hours, minimum wages, female employment, wage payments, industrial safety and other labor standards; (2) social insurance programs; (3) fair measures for voluntary arbitration, mediation, and conciliation of labor disputes; and (4) worker representation on development boards and other key public manpower and employment institutions.

Above all, a wage earner's dignity is best safeguarded by freedom to join fellow workers and engage in collective bargaining and other self-advancement efforts through organizations of his own choice. This principle, of course, is true for others such as professionals, administrators, farmers and employers.

As in the case of other factors, worker productivity and welfare interlock and interact with each other and with many other development policies.

Planning and Coordination

By itself an "active employment and manpower policy" cannot insure full employment, growth and stability. Many interlocking factors are involved: education as well as training; investments in land, plant, and equipment as well as in people; commodity and capital as well as labor markets; and political as well as worker organizations. Full utilization of all the factors of productivity, including the labor force, is a prerequisite for maximum achievement of growth and stability.

Integrating manpower and employment policies into an overall development policy requires (1) recognition by the highest development authority of the importance of manpower and employment; (2) establishment of specialized manpower and employment competency in the government; and (3) bringing specialists and generalists together.

There is no ideal administrative arrangement. Variables among the developing countries not only affect the kinds and magnitudes of manpower and employment activities but also the grouping into organizations. Moreover, changes constantly occur, necessitating new responses.

Affirmative manpower and employment policies and programs require an organization for planning and coordination sufficiently powerful to: secure the participation and cooperation of all groups; marshal ideas and assistance of all who can contribute; inform management enterprises, staffs of educational institutions, workers and financial institutions, farm groups, and government personnel of various aspects of employment and manpower planning and development; motivate individuals and organizations in every local area where important economic activities are being performed. There must be at the highest level of government, and independent of all operational departments, a mechanism for formulating, reviewing, evaluating, recommending, and coordinating an active manpower and employment policy.

Although most developing countries already have some kind of formal or informal central machinery for employment and manpower planning and coordination, improvements are possible in every developing nation. Coordination of efforts within and between government agencies, between different governmental levels, and between the public and private sector is highly complex and difficult. An essential first step is for the chief executive to clarify lines of authority and to place primary responsibility for planning and coordination in one agency.

Manpower authorities should ensure that the national manpower objectives are fully recognized by all relevant sectors of government and that the employment objectives are given the high priority they deserve.

Most useful and effective is a conceptual frame of reference and a systems approach. The processes by which manpower is developed, jobs created, job seekers and job opportunities brought together, productivity improved, and human dignity advanced are complex. A frame of reference permits a specific problem to be considered in terms of its interrelated elements (for example, labor force formation, allocation, utilization, welfare, incentives, statistics, organizations) so as to clarify significance and to formulate alternative solutions.

When all is said and done, planning must constantly keep in mind that full, productive and freely chosen employment will be more easily attained and maintained when a nation is determined that nothing takes priority over people.

We have tried to point out that workers and jobs, proverty and productivity, unemployment and training, freedom of choice and many other seemingly unrelated factors are interrelated from the standpoint of an "active manpower and employment policy." Apparently independent and sometimes antagonistic questions are, in a real sense, one single question with many parts. A systems approach to an active manpower and employment policy can promote unity in theory and practice.

A development effort must include commitment to an active manpower and employment policy and program for full, productive, and freely chosen employment.

THE ROLE OF TRADE UNIONS IN DEVELOPMENT

Everett M. Kassalow

Western trade unions were generally established as a reaction to the growth of the capitalist industrial societies in the 18th and 19th centuries. In most of these countries political stability was largely accomplished before the major surge of trade unionism took place. As a consequence, the thrust of these unions was, to a very large extent, economic in character.

The sociopolitical inequalities still confronting many European workers led them, however, to establish alliances between their unions and socialist political parties. These alliances have persisted over many decades, and still serve to distinguish most European from American unions. The latter are less partisan politically and, in some ways, less committed politically.

While one can thus distinguish between American and continental European union forms, it can be said that in both cases union movements grew, to an important extent, outside of the decision-making channels of the economy, and were highly independent. Their role, for a long period, was almost exclusively that of defending and advancing workers' interests on a fairly limited plane. Today, in these same countries, the union role is changing and unions are increasingly integrated in the society. They participate in economic planning, manpower development and other important activities, even as they continue their defending and demanding activities with regard to on-the-job needs. As one turns to a consideration of unions in the less-developed nations, it is useful to keep the foregoing background factors in mind since they affected Western union development, and since most literature on the subject of unions starts with the Western experience.

Unions in the less-developed societies often are closely involved in political processes. They are confronted with unstable political environments, and must participate in the effort to insure stable citizenship rights for their members as well as the general population. Moreover, the political leaders of the new countries are usually reluctant to accept the idea of a completely independent trade union movement which, they fear, might not confine itself to purely economic activities, but, instead, become a political opposition.

The economic framework of the less-developed countries also shapes the trade unions in a manner different from that of Western experience. In the former countries, almost without exception, the government exercises a large and often dominant influence in the critical economic decisions affecting investment, income, the determination of new industries and plant location, manpower training programs, and related matters. The government is also, in many instances, the major employer in the country.

Under these circumstances the role of unions is inevitably different, in many respects, from the role they played during Western industrialization.

With the greater understanding development economists now have of the importance of the investment in human resources, the potentialities of the union role are enhanced. The following areas of action are indicative of the ways in which unions can contribute directly to development.

1. There is a large body of experience (in developing and less developed countries) which indicates that unions can play a major role in the administration of social security and other health and welfare programs.

2. The absence in many of the less-developed countries of a large, native managerial class may create a significant opportunity for the use of cooperatives for both new production and consumption activities. The trade unions, as part of the modern sector, can, in some instances, be an important center for "co-op" activities. Enlisting their cooperation for this purpose may also open the possibility that through voluntary check-off systems workers' savings can be added to the countries' investment sources.

3. The importance of the "human factor" in improved productivity is well understood by economists and sociologists today. Often, improved

human relationships and effective on-the-job cooperation can be as useful as new capital investment in raising production and helping a nation get on with development. This kind of cooperation involves the meaningful participation of the workers; and this means working with and through representative bodies of the workers, of which trade unions are the most plausible form. The establishment of productivity centers, in which unions are important partners, can help to spread improved forms of production and technique.

4. Top level, economic planning in the nation should reflect the needs and interests of the mass of people. If the latter are to be enlisted successfully in pursuit of planning goals, channels must be opened to help them participate in the process. For workers, the obvious channels for such participation are trade unions.

It is recognized that these efforts will impose particularly severe burdens on workers and unions who are often not yet sufficiently prepared for the task outlined above. To assist unions in the performance of these tasks, special education programs should be established and geared to help workers and unions with their development opportunities and responsibilities.

While we have emphasized the new tasks and opportunities for unions in the development process in the new societies, it must be understood that unions must also be responsive to workers' traditional needs at the "job" level. They cannot become mere arms of the state. If they are not representative, the unions will not be effective in enlisting the workers in the "drive" for development.

THE ROLE OF NONGOVERNMENT ORGANIZATIONS IN COUNTRY DEVELOPMENT

George L-P Weaver

Failure to engage all available human resources in development not only acts as a brake on economic growth but also does little to cure the basic cause of social and political instability which pose a constant threat to the gains achieved on the economic fronts.

The United States Government believes this so strongly that this precise philosophy has even been spelled out in the Foreign Assistance Act. The Act states that "in carrying out programs (of country assistance), emphasis shall be placed on assuring maximum participation in the task of economic development on the part of the people of the developing countries, through the encouragement of democratic private and local governmental institutions."

How can this best be done? It can best be achieved through the fostering of cooperatives, labor unions, trade and related associations, community action groups and other organizations which provide the training ground for leadership and democratic processes. It can be achieved through increased participation of such groups of individuals in the planning, execution and evaluation of development undertakings and, generally, through the building of democratic private and public institutions on all levels--local, state and national.

Those countries which are developing most rapidly--both in rising per capita incomes and strengthened institutions--are those for the most part where government policies, investments of self-generated savings and external assistance have combined to bring the creative forces of private initiative into full play. Taiwan, Israel, Pakistan, the Philippines and Korea are all examples.

I believe the classic example of non-government organizations making a major contribution to country development is the role of cooperatives. Cooperatives have proved to be one of the truly important instruments for economic, social and cultural development as well as for general human advancement in the developed countries. Thus, it is understandable that their potential for constructive good in the developing countries is immeasurable.

Cooperatives are a valuable medium:

> for improving the economic, social and cultural situation of persons of limited resources and opportunities as well as encouraging their spirit of initiative;
>
> for increasing personal and national capital resources by the encouragement of thrift, by eliminating usury and by the sound use of credit;
>
> for contributing to the economy an increased measure of democratic control of economic activity and of equitable distribution of surplus;
>
> for increasing national income, export revenues and employment by a fuller utilization of resources--for instance, in the implementation of systems of agrarian reform and of land settlement aimed at bringing fresh areas into productive use and in the development of modern industries and processing of raw materials;
>
> for improving social conditions and supplementing social services in such fields as housing and, where appropriate, health, education, and communication;
>
> and for helping to raise the level of general and technical knowledge of the cooperative members.

Examples of Cooperatives

An excellent example of effective cooperatives in a developing country is Pakistan's Comilla project. There the cooperative federation organizes, trains and supports many village cooperatives, supplies supervised credit and oversees rural banking, builds marketing systems to protect the villagers both as producers and consumers, sets up workshops and machinery training institutions, and establishes industrial units for the village cooperatives to augment the income of the farmers and provide employment.

Tunisia has had cooperatives for many years. About 20 percent of the working population participates in the country's approximately 800 cooperatives. Over 80 percent are in agriculture, including grain marketing, wine distribution, agriculture machinery and petroleum products. Others are concerned with consumers, livestock, handicrafts, construction and fishing. The fishing cooperative, operated by the Tunisian trade union movement, has been highly successful.

In Latin America, cooperatives are playing an increasingly important role. The Charter of Punta Del Este, which established the Alliance for Progress, specifically pointed to the need for cooperatives and labor unions. It said: "Ministries of Labor should view as a basic part or their task the encouragement of cooperative activities by workers in collaboration with other national and international agencies."

In the spirit of this mandate, the American Institute for Free Labor Development has been active over the past few years in instructing union members on the formation and operation of cooperatives, in assisting existing cooperatives or initiating new ones.

The country of Panama has done an excellent job in cooperative housing.

One of the most dramatic success stories involving Latin American cooperatives concerns the workers' bank in Lima, Peru. The Alianza Sindical Cooperative, founded three years ago to provide low-interest loans to housing cooperatives, began with $135,000 saved by the workers and a $6 million loan from AID. This enabled it to effectively make low-interest, long-maturity loans to housing cooperatives. As of the first of this year, there were over 7,200 savers and capital amounting to over $1.7 million. Loans have been made or committed to eight cooperatives for over 500 homes.

Other successful cooperatives aided by funds from the U.S. labor movement include a sewing cooperative in Lima, a baking cooperative in La Paz, a consumer cooperative for the telecommunications workers in Rio de Janeiro, and a drug cooperative in Cartagena, Colombia.

One important aspect of the cooperative movement is the employment it creates. In Israel, the cooperatives and labor-owned firms have grown so that today they employ over 27 percent of the country's work force. The cooperative agricultural settlements produce over 62 percent of Israel's agricultural production.

In view of the many advantages of cooperatives, why have they not spread even faster in developing countries than they have to date? One of the principal impediments is the lack of trained managers. Many countries have launched ambitious cooperative programs only to see them founder because of this factor. As a result, many government and cooperative leaders now emphasize training cooperative managers as an integral part of their overall cooperative development program.

Labor Unions and Cooperatives

A number of the labor unions in many of the developing countries, of course, are closely involved in the cooperative movement. This brings us to another major non-government force with important responsibilities and considerable potential for social and economic development--the trade unions. A brief glance at the activities of organized labor in some of the developing countries will provide an idea of what is being done and what can be done through the trade unions:

In Indonesia, the Railway Workers' Union controls a foundation which operates welfare, cooperative and business enterprises such as a "guarantee and savings foundation" which combines a credit union with an accident and death benefit society, a medical care center consisting of a polyclinic, dental clinic, children's clinic and maternity home, a weaving and knitting mill, a work clothing factory and a dry goods store.

In Korea, the Bank Clerks' Union has set up three consumer cooperatives and has plans for more. It has also organized mutual aid societies and credit unions. The Korean Longshoremen's Union has established four union halls, 61 workers' classrooms, six restaurants, four clinics, and a number of barber shops, bath house and a dormitory.

In Malaysia, the National Union of Plantation Workers, representing workers on rubber, oil, palm, coconut, tea, and pineapple estates, has conducted training courses for over 5,000 workers, providing high school and university scholarships to children of union members and built two hotels where plantation workers' children, who live too far from school to commute, can have room and board while attending school.

Looking to the future, the National Union of Plantation Workers has recently set up an "All Purposes Cooperative Society" to buy estates, organize housing developments and undertake construction work. This Malaysian union has also developed plans for training children of plantation workers of occupations that are expanding faster than the traditional work of rubber tapping.

Trade unions and cooperatives are the largest non-governmental organizations able to make major contributions to economic and social development. However, there are organizations in the U.S., such as the Ford Foundation, the Rockefeller Brothers Fund, a number of religious associations and business groups, and of course the Agency for International Development, which work through public and private, government and non-governmental bodies to support programs in developing countries.

Five Areas Which Need Encouragement

One point to make quite strongly is this: such highly useful organizations as trade unions and cooperatives cannot exist and flourish in a vacuum. They need considerable governmental help, guidance, and protection if they are to play a useful role in development. There are five major areas in which these organizations need aid and encouragement:

1. Training of leadership. A national government can assist most significantly to build up voluntary organizations such as trade unions and cooperatives by helping to train leaders and staff technicians through special courses in the public schools or universities. More useful would be extension or mobile unit training programs which would be taken into the community. A few top leaders or high-level technicians could be trained by scholarships through universities or sent abroad for training. Types of training which would usually be significant for voluntary organizations operating at the local level are the following: training in leadership philosophy and methods; administrative management; how to communicate with and motivate people; how to conduct meetings and discussion groups; accounting; and technical processes where the organization deals with production, distribution, etc.

2. Legislation. Protective legislation is important, especially in cases of trade unions, small farmer organizations, cooperatives and credit institutions, and similar groups where opposition by conservative vested interests is likely. Such legislation is of no value, of course, unless adequately enforced.

3. Financial assistance. This could be done in several ways: by direct subsidy, by tax exemption, by low-interest loans, by providing land, buildings, etc., free or at low cost, and by donating equipment. External assistance for such programs is often possible.

4. Technical assistance. This is related to the training of leadership. It might consist of supplying government advisors and technicians at low cost, teachers for training leadership, research projects, pilot and demonstration units, publications, and audio-visual aids.

5. Incentive awards. Governments have various means of encouraging and recognizing efforts of voluntary groups. For example, it can be done by giving awards for outstanding contribution and performance, by mentioning outstanding individuals in public speeches and information programs, by inviting groups to the national capital for special tours, etc.

In summary then, voluntary nongovernment organizations, such as cooperatives and trade unions can be instrumental in contributing to many aspects of national development--by increasing production and improving distribution and consumption of food and basic consumer goods, in creating new employment, aiding in educational and training, in assuring sound and constructure credit programs, in providing housing, medical services, recreation, child care programs and the myriad other things that combine to produce an enlightened and progressive society.

As leaders in your respective countries, you can do much to encourage and strengthen these nongovernment bodies. I hope you will accord them the attention they deserve. The benefits your country will reap from this will more than repay your efforts.

PART V

United States Policies, Programs, and Problems

MANPOWER IN THE UNITED STATES

Vivian Henderson

The concept and use of manpower planning in this country--and the problems associated with it--are of recent origin. Historically, public concern has been expressed only during national emergencies such as World Wars I and II when manpower planning became important because of shortages of skilled labor needed for critical output and also because of the manpower needs of the military.

Conscious manpower policy has been of relatively recent origin, that is, post-World War II. A major piece of legislation is the Employment Act of 1946. This was a far-reaching departure from traditional thinking, and it dealt mainly with the use of _fiscal_ and _monetary_ policies to promote the Act's goals of full employment, economic growth, and stability.

Even with the new thinking manifested in the Employment Act of 1946 and the 1962 Manpower Development and Training Act, we still do not have an adequate manpower policy. There are several reasons for this. For one thing, current manpower policy tends to be fragmented--that is, it is largely oriented toward state and local governments and implemented through the local school systems and boards of education. This is not necessarily a bad principle, but a _national_ policy is stifled and impeded by the tendency for state and local units to develop their _own_ policies. All too often these policies are directed to the local market. Programs of this nature miss the real point; there are no longer just local labor markets; if we only train people for local jobs, then all we have done is to curtail their mobility and stifle any national plans.

Another factor which detracts from the development of national manpower programming is the fear on the part of the local and state school systems that the Federal Government will take over the schools. In my opinion, this is not the central issue or objective. The concern should be to what extent we can complement national programs through local and state school systems.

I stated earlier that our manpower policies and programs were of recent origin. In all fairness, exceptions to this should be noted. The Morrill Act of 1862, for example, was a land-grant college act to establish teaching programs to promote training in agriculture and the industrial arts. We also had the Smith-Hughes Act of 1917 which set up a system of vocational education in local high schools. In addition, our immigration policy was a form of a manpower policy. But none of these programs answer today's manpower problems. There has been a shift from rural (agricultural) occupations to urban occupations; from manufacuring industries to service industries; and, even within manufacturing, from low skilled to higher skilled occupations. Yet we have not moved our manpower programs in the same direction. Why? Because the adjustment process has been dominated by _rural_ interests.

Many of our failures in other areas are related to the manpower field. Much of the violence and tension in the Negro community, for example, is a result of our lack of success in manpower policies. These policies virtually ignored the potentials of this group, and, consequently, one of the largest wastes of resources has to do with Negro power.

This country is now consciously addressing itself to manpower planning and programming. We have established goals and priorities, and we evaluate them constantly.

Let me review briefly the goals of manpower policy as I see them.

1. We want to strengthen elementary and secondary education, recognizing that education is the key component of manpower policy.

2. Programs have been initiated to improve vocational guidance and career counseling.

3. Facilities have been developed to train skilled workers.

4. We support equal opportunities for Negroes in terms of employment and the acquisition of skills.

5. From a short-run point of view, we seek to provide new training and retraining opportunities.

Yet as far as these goals go, they do not go far enough. It was assumed that the jobs would be available if only the people were trained, but all too often jobs simply are not available. It is for this reason I am concerned with programs of labor use, that is, the creation of job opportunities. Not only are we concerned with the unemployed, we are also interested in those outside the labor force because much of the restlessness we see often comes as a result of idleness, especially among the young. The solution to this problem should be a vital component of our manpower program. What we need is a guaranteed employment program, one which is work-oriented, though, and not one which simply provides a guaranteed income, except to those who obviously cannot work. We need job opportunities, but these should be decent jobs at decent wages.

By way of a conclusion, let me state that today's manpower problems center around the use of human resources, especially the unemployed, the underemployed, and those outside the labor force. There is a need for training and retraining. There is an overemphasis on "credentialism"--too many jobs are tied to credentials such as diplomas and test scores that may be unrelated to potential job performance. And we need a more comprehensive approach to our problems as well as more research to enable us to gain additional knowledge about our manpower resources.

DEVELOPING MANPOWER TRAINING SYSTEMS IN THE UNITED STATES

John P. Walsh

At the federal level in the United States, there are two departments which are charged with the responsibility of developing manpower training systems. They are the Department of Health, Education and Welfare (HEW) and the Department of Labor. These two are closely related in many aspects of the training programs, but each has its own particular areas of concentration. HEW has a well-defined office of education, whereas the Department of Labor's general program involves manpower administration.

Department of Health, Education and Welfare

The basic function of HEW in the training arena is the promotion of vocational and technical education. Its legal foundation for this function is found in the Vocational Education Act of 1963. The Federal Government provides $250 million annually to support programs in vocational schools.

HEW programs are concerned with youth and adults in an in-school situation; that is, the training and support of individuals are always accomplished in a classroom in which a specific educational program is being administered. There is no on-the-job training which is directly supported through HEW programs.

The HEW training programs are rather unique in that the state and local governments control and direct them. Thus, there is no one general program directed from a central agency, but rather many plans, each of which is arranged and administered according to the needs of the particular state or local community. The United States Government provides funds, advice, and leadership, but the final say rests with the local people involved in the administration of the programs. The Federal Government acts as the common link for the overall training program.

In addition, the funds that are appropriated by HEW are matched dollar for dollar by the state community. The local community may also provide additional funds. In this way, the original $250 million gets the program underway, but it is only "seed" money. It acts as an incentive to the states and local communities to begin such training programs.

Department of Labor

The policy of the Department of Labor in manpower training and development stems from the Fitzgerald Act of 1937 and the Manpower Development and Training Act (MDTA) of 1962. By virtue of these acts, the Labor Department provides $500 million per year for the development of training in the industrial setting and in training centers at particular educational institutions. The latter training centers generally overlap with the HEW vocational programs. Occasionally, the Labor Department training centers and the HEW vocational school are in the same location. This establishes a close physical link between the two programs. However, most of the Department of Labor programs deal with individuals who are out of school and are trying to improve their skills.

Perhaps the basic difference between the HEW and the Department of Labor programs is that the Labor programs are totally financed and directed by the Federal Government. Funds are controlled by the Manpower Administration, and programs are administered under Federal auspices. Unlike HEW, which uses some funds for actual school construction, Department of Labor finances are used for equipment and development of training aids.

The Department of Labor may provide either institutional or on-the-job training. In the former case, it cooperates closely with HEW in determining what particular schools and facilities can offer the best training situation. On-the-job training and institutional training each receive about half of the funds which are available from the Labor Department. The Employment Service branch of the Manpower Administration makes the final decisions as to where training is needed and what kinds of programs are necessary. The on-the-job training funds go directly into the industry setting to promote skills while production in the factories continues. Apprenticeship programs generally begin after an individual has acquired some basic knowledge through on-the-job training.

Use of Facilities

More and more, school facilities are being used on a full-time basis. In many of the larger cities in the United States, some schools are operating 24 hours per day. The Milwaukee Vocational and Adult School in Milwaukee, Wisconsin, is a good example. It is a combination of a technical school, a trade school, an apprentice school, and an adult education facility. It operates 24 hours per day in three eight-hour shifts.

7:00 a.m.	3:00 p.m.	11:00 p.m.
Regular Day School	MDTA Courses Vocational Upgrading	MDTA Courses Vocational Upgrading

This type of a program enables people who are working and must be at their jobs during certain hours to go to school at other times. The school shifts pictured here are patterned after the industrial work day for just this purpose. Obviously, such a program presents a difficult task for people in that there is literally only time for school, work, and sleep. However, many people believe the better jobs and pay that will be available to them because of the additional training are worth temporary hardships.

This around-the-clock approach to training cuts building and equipment costs per trainee and gets the most educational advantage out of the existing schools. The additional costs in this program are in providing staff personnel, and both HEW and the Labor Department give full financial assistance in this area.

This presentation has given a brief outline as to the organization and structure of the development training system in the United States.

MANPOWER ADMINISTRATION AND PROGRAMS IN THE UNITED STATES

Elmer Jebo

Although a number of other Federal agencies and departments are involved, the Manpower Administration within the Department of Labor is generally the principal manpower agency of the Federal Government.

The mission of the Department of Labor, created by Congress in 1913, was and still is the promotion of the welfare of the American wage earner. The Department's organizational chart reveals that the several areas are related to labor welfare and welfare programs. There are: labor standards, labor management relations, international labor affairs, manpower administration, and labor statistics. The remaining organizations, such as the Office of the Solicitor, for example, are largely supportive in nature.

The Manpower Administration has three operating bureaus: the Bureau of Work Programs, the Bureau of Apprenticeship and Training, and the Bureau of Employment Security. The Employment Security System, that is, the system of state employment offices, operates through the Bureau of Employment Security.

There are two other supporting organizational units. The Office of Financial and Management Services is primarily responsible for fiscal matters, personnel management services, etc. The Office of Manpower Policy, Evaluation, and Research is basically the staff arm of the Manpower Administrator.

The manpower programs of the Federal Government may be divided into four major program areas: applicant services; employability training; work experience; and research, experimentation, and demonstration.

Applicant services are personal types of services provided for our workers, particularly those who are unemployed. Applicant services are essentially:

1. Recruitment or Outreach. It is not enough to open a service office and simply wait for needy people to seek out our services. The disadvantaged and disillusioned unemployed must be sought out and made aware of the possibilities for helping them to alleviate their plight. Consequently, the outreach service uses community workers to seek out the needy and steer them to the offices where various services are provided.

2. Counseling and Testing. Counseling and testing services determine the individual's problems and potentials. A possible course of action is outlined to enable him to move into a responsible job.

3. Job Development. The job development is concerned with getting private employers to register their need for workers with the local offices. More and more, private employers are urged to restructure their jobs to utilize increasing numbers of less-skilled individuals.

4. Referral. A referral service directs individuals either to jobs or to other services which they need before they become employable, such as medical assistance, legal aid, training, etc.

5. Placement. A placement service is provided for filling the job orders that are obtained from various sources.

6. Followup. Providing the services discussed thus far is not enough. It is necessary to follow up the clients to determine whether they remain employed and continue to meet their day-to-day problems.

The applicant services are primarily provided by local employment services, work-experience sponsors, on-the-job training contractors, and experimental and demonstration contractors. The sponsors and contractors are universities, community groups, and various other public and private organizations.

Employability training is the second Federal major program area. The heavy government involvement is relatively recent. The principal Congressional authorization for job training is the Manpower Development and Training Act of 1962. Employability training is characterized by flexibility.

1. Employability training can take place in a classroom setting, an on-the-job setting, or some combination of both.

2. It can be full-time or part-time.

3. It can consist of training in occupational skills, basic education, communications skills, employment skills, or any combination of these.

Once again, employability training may be provided by various sources such as state employment services, on-the-job training contractors, work-experience contractors, experimental and demonstration contractors, and the like.

Work-experience programs constitute the third major governmental manpower area. In these programs, unlike the skill training programs, the Federal Government pays the individuals' total wages. The purpose of work-experience programs is, on the one hand, to help to alleviate unemployment and, on the other hand, perhaps more importantly, to provide individuals with work experience which increases their chances of success in the competitive labor force.

There are four major work-experience programs:

1. Neighborhood Youth Corps. This, the oldest and largest of the work experience programs, is primarily designed to aid youth 21 years of age and under. Full-time high school students may work up to approximately 12 hours per week. The earnings from the part-time employment allow the student to continue his education. The individuals who have dropped out of school are placed in closely-supervised jobs, usually with some local agency or a nonprofit organization. They work from 30 to 40

hours per week and receive wages which are never less than the minimum wage set by Congress. It is hoped that the young people will develop skills, work habits, and attitudes to enable them to accept and perform well at jobs in the private sector. Finally, the Neighborhood Youth Corps administers various summer programs primarily designed for youths who are unable to find jobs elsewhere.

2. New Careers Program. In this relatively recent and small work-experience program, the primary objective is to move individuals into subprofessional jobs. The individuals generally work for public or non-profit organizations, and the Federal Government pays the wages during the training period, after which it is hoped the institution will keep the individual on the job.

3. Special Impact Program. This program differs from the other in that it focuses only upon the disadvantaged city areas. It may provide support services including child care, jobs, materials to rehabilitate homes, etc. The ingredients of the Special Impact Program are quite variable. Many specific measures are acceptable as long as they help the individual move from unemployment to employability.

4. Operation Mainstream. This program primarily helps older workers in rural areas. It is aimed mostly at providing people with jobs in beautification of highways, recreational facilities, etc.

These work programs, as well as those of other agencies and departments, are primarily designed as training situations--as incentives for both the people and the community. Many individuals feel that sooner or later we will have to face up to the idea of the government as the employer of last resort. There will always be people who cannot compete in the labor market, and if they are to become employed, the government will have to do the employing, either directly or indirectly. However, it is important to note that these programs are not, strictly speaking, public works. They provide limited periods of government support to prepare the individual to compete in the labor market.

Research, experimentation, and demonstration is the fourth major Federal manpower program area. Research attempts to provide answers to such questions as "What do we need to know and do in order to execute and develop manpower programs?" Research is mostly carried out under contracts, usually with universities through grants. Experimental and demonstration programs seek new ways of meeting the problems of the hard-core unemployed. The study results are scrutinized for possible utilization in all of the regular programs. Among the areas of experimentation and demonstration are labor mobility and bonding.

In short, the role of the U. S. Federal Government in the development and implementation of manpower programs is crucial and is indeed directed toward the "promotion of the welfare of the American wage earner."

THE ROLE OF THE EMPLOYMENT SERVICE

John Murray

We cannot discuss American manpower programs without considering the Employment Service. A public employment service, properly established and operating, can be the most important institution at a nation's disposal for meeting manpower problems. Most manpower programs involving improvement of employability, skill training, and the like come to a focus in the local public employment office.

The primary function of the Employment Security is recruitment, itself a major program, for we are concerned with individuals who would not normally seek the assistance of the Employment Service. Thus, we have had to develop techniques for finding them. Since the various functions of the Employment Service are familiar, I will focus primarily upon the Service's organization. Such an approach is relevant, for the Employment Service organization can be confusing to anyone not extremely well-versed in the political arrangements of the United States.

The U. S. Employment Service is the joint responsibility of the Federal Government and the various state governments. The Federal Government formulates the policies, standards, and guidelines of operation. It evaluates programs and finances the costs of operation. But state governments actually operate the Employment Service.

The Federal Bureau of Employment Security develops the techniques and procedures implemented by the local offices. It coordinates the activities of 11 regional offices. The regional offices are not operating branches, however. But rather they primarily oversee operations within the various states falling under their jurisdiction. The number of states in each region is determined by labor market size.

Each state's administrative office supervises the operation of the local offices. There are administrative offices also in Puerto Rico, the Virgin Islands, Guam, and the District of Columbia. The 54 administrative offices operate some 2,300 local employment offices on a full-time, year-round basis.

In some larger cities, the office is referred to as a metropolitan area office. It is simply a very large local office designed to take care of the manpower problems in a major metropolitan area.

In approximately 160 cities are Youth Opportunity Centers. These are basically Employment Service offices for youths between the ages of 16 and 22. They provide the youngsters more intensive service than an ordinary Employment Service office can provide. It is here that the Employment Service gets involved in such programs as the Job Corps and the Neighborhood Youth Corps, because the Youth Opportunity Centers recruit candidates for those programs.

I hope I have conveyed, at least in broad outline, the way in which the United States Employment Service is organized to carry out its basic functions, i.e., operating the unemployment insurance service and seeking jobs and finding employment for the unemployed.

OVERVIEW OF THE BUREAU OF APPRENTICESHIP AND TRAINING

Clarence Eldridge

The Bureau of Apprenticeship and Training was established by law in 1937, primarily as a result of industry's growing realization that our vocational educational system was not turning out the kinds of skilled individuals it needed. The Bureau of Apprenticeship and Training, by working closely with both management and labor, seeks to provide individuals with work opportunities and on-the-job training to develop skilled and highly-skilled workers.

The Bureau functions basically as a promotional agency. It does no training but serves labor and management in consulting and advisory training capacities. The Bureau provides industry with nationwide standards so that the various industries may more efficiently and effectively generate the types of training experiences necessary to ensure their continued prosperity as well as that of the nation.

Although apprenticeship training sometimes has been criticized, the fact remains that the key to a successful industrial operation is the skilled craftsman, and the formal educational system by itself has not, in general, prepared individuals for these kinds of occupations. The importance of a bureau that sends its consultants and advisors into the field to help individual industries develop the most efficacious training programs becomes immediately obvious.

The apprenticeship approach has a number of most desirable features. First, on-the-job apprenticeship training allows an individual to "earn while he learns." In addition, however, he helps to subsidize his own training through his production. Third, apprenticeship, in most instances, allows learning to take place on the actual machinery and equipment of production. In developing nations, where resources for training programs are limited, the advantages associated with on-the-job training assume special importance.

A note of caution--to be most successful, both labor and management must be brought together in the development of training programs. Turkey illustrates the difficulties that can arise when the training objectives and operations of management and labor are not synchronized.

The Turkish training movement revealed an irregular and somewhat erratic trend. The management-oriented training directors were quite successful in initiating on-the-job training programs, making them prime candidates for advancement into other management positions. The high director turnover rate serves as a major explanation for the ups and downs of the Turkish training experience, and it highlights the need for a closer integration of management and labor in the direction of training efforts.

Rapid technological advances and developments in automation have increased job segmentation, pointing up the need for Bureau activity in relatively short-term, on-the-job training programs.

Regardless of the length or type of on-the-job training the Bureau becomes concerned with, the participant's educational background is basic. The instruments and equipment of a modern industrial economy necessitate basic competence in reading, writing, and arithmetic. A prerequisite for apprenticeship, for example, is high school education or its equivalent. Although educational attainment is a problem for most developing nations, cultivation of highly-skilled individuals is vitally important for the industrial advancement of any nation.

In closing, it is appropriate to recall the thoughts of the late President Kennedy that have in a sense provided a rebirth for individuals in the training field. In his inaugural address, President John F. Kennedy urged that the greatest natural resource of any nation is the skills of its work force, and that it is a nation's responsibility to see to the development and utilization of those skills.

THE WOMEN'S BUREAU

Elsie Dennison

The Women's Bureau was established by Congress in 1920 to investigate and report on the welfare of women in industry. The scope of the Women's Bureau has since broadened considerably. Today it serves the woman in her roles as homemaker, citizen, volunteer worker, and wage earner.

The Women's Bureau is neither an operating nor a research agency but an attitude agency, a clearinghouse of information on women. For example, the Bureau has recently published a manual on women workers which provides a wealth of information concerning such facts as the number of women working in the labor force, their occupations, age, marital status, earnings, educational attainment, etc.[1] These and other statistics help to convey the tremendous importance of women workers today.

At present, more than 28 million women workers in the United States represent one-third of all individuals in the labor force. Since 1940, the number of women in the labor force has been increasing at an extremely rapid rate, and there are no signs of a change in the foreseeable future.

Many of the women workers are in the older age groups, approximately one-half being 45 to 54. Three-fifths of all women workers are married, and one out of every ten is a family head. Approximately 25 percent work part-time.

The typical American work pattern is employment for a few years after marriage followed by a total or partial withdrawal from the labor force during the childbearing years with reentry thereafter. Since the median age of completed childbearing in the United States is about 30, American women can indeed look forward to a considerable number of productive years.

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[1] 1965 Handbook on Women Workers, prepared by the Women's Bureau, United States Department of Labor, Washington, D. C., 1965.

The following are among the major concerns of the Women's Bureau:

1. The changing job picture and occupational outlook for women. More and more women enter not only occupations traditionally held by males, but also the newly emerging occupations. Of particular interest are the newer aide occupations, such as nurses' and teachers' aides. Not only do these provide respectable and worthwhile jobs for increasing numbers of women, but they allow further utilization of the professionals.

2. The upgrading of the status of certain occupations. Too often some of our very crucial occupations have been considering demeaning. Household employment is a case in point. To increase the prestige of household employment, the Women's Bureau, in conjunction with some 18 national organizations, is expending great efforts for the improvement of the status and dignity of this particular occupation.

3. Wages, hours, and working conditions. The Women's Bureau actively presses for legislation on minimum wages, equal pay, and labor standards. Despite improvements in these areas, much remains to be done. For example, goodly numbers of women are not yet covered by any minimum wage law.

4. The educational and counseling needs of women. The rapidly changing job picture and occupational outlook for women highlights the necessity for educational and counseling services at all stages of the working career.

5. The political and civic status of women. Great need exists for community services to help women in such areas as the right to serve on juries, guardianship rights, property rights, and the like.

6. The increasing entry of women into top leadership and professional roles. The Women's Bureau actively seeks means for increasing the mobility of women into upper occupational strata. At the present time, for example, women constitute only 3 percent of all lawyers and 7 percent of all doctors.

To summarize, the Women's Bureau has been and continues to be both directly and indirectly involved in action and attitudinal programs concerned with the present and changing status of the American woman in her numerous roles.

WORK PROGRAMS

Mark Battle

The Bureau of Work Programs is one of three operating bureaus within the Manpower Administration of the Department of Labor, primiarly responsible for administering four manpower development programs, the Neighborhood Youth Corps, Operation Mainstream, New Careers, and Special Impact. The Bureau's administrative responsibility is twofold: It designs manpower programs in response to Federal legislation, and assists local communities in tailoring these programs to meet their particular needs.

The first and oldest program is the "Neighborhood Youth Corps," designed to help young people who are poor and need meaningful and rewarding work experience. One phase is concerned primarily with disadvantaged youths still in school. Its objective is to provide qualifying individuals with work opportunities which will enable them to acquire not only useful skills and job experience, but also income for the purposes of continuing education. This program is administered locally by the school systems under Federal contracts.

Another phase is geared to youths who are unemployed and who are no longer in school. The Bureau contracts with local community sponsors for: work experience for wages; appropriate counseling and guidance; basic and remedial education; and particular assistance to individuals either in finding jobs or in providing them with other types of skills training.

The Neighborhood Youth Corps summer program, basically an extension of the regular in-school program, is aimed at enriching the experience of those individuals who have been in school and at insuring their return to school after the summer vacation.

The Bureau's second major program is "Operation Mainstream," designed to focus on older rural adults. It provides employment with minimum training on conservation and beautification projects to insure that the productive life of older workers is maintained as long as they are willing and able to work and that their activities are of benefit to the community.

"New Careers" is the third major program. The normal route to becoming a professional in the area of human services is the completion of high school, college, and professional graduate training. Any individual who cannot afford to spend a large number of years in the formal education situation is, in effect, barred from maximizing his potential contribution to the human services area. This problem is especially crucial because of the vast labor shortages in the human services field.

New Careers provides a second route. Local sponsors request community agencies active in human services to identify the jobs that need to be done, and to design specific career ladders extending from the entry to the professional levels, and to specify the training necessary for performing the duties at the various levels of the career ladders.

The Bureau of Work Programs then contracts with the local sponsor to cover the costs of the initial work and/or training period for those disadvantaged individuals who have demonstrated potential for success in the human services field, particularly health services, educational services, housing services, public safety, and corrections services.

The Bureau makes certain that the sponsors' activities are indeed directed towards attaining the objectives in the contracts.

Finally, there is the Special Impact or "Concentrated Employment Program," which is most appropriately conceived as a system for linking existing programs in such a way as to make them applicable to a particular area with the greatest possible impact.

The Bureau has seven regional offices which help local sponsors with the development of the various programs and monitor them.

The Bureau's headquarters primarily give leadership and support to the field organization through four basic offices: the Office of the Administrator, the Office of Program Design and Standards, the Office of Planning and Evaluation, and the Office of Operations.

The Office of Program Design and Standards develops special program models applicable in different communities and designs operating standards and procedures. Also, it creates specialized tools to help the sponsors with their programming and operations.

One of the most crucial problems of manpower development programs is the evaluation of effectiveness. How is effectiveness to be defined? How is it to be measured? These are the kinds of questions which are of concern to the Office of Planning and Evaluation. The Office also makes long-range plans, interpreting and projecting the effects of potential legislation. This Office is concerned with applying computer technology to the processing and analysis of data essential for successful administration.

The Office of Operations directly supports the field staff. It has three basic divisions. The Division of Agreements Administration oversees and supervises the technical work of the field contract staff and helps to refine the contracting mechanisms.

The individuals in the Division of Technical Assistance are troubleshooters, particularly well-skilled in problems of either human resource development or organizational response. Thus, where the field staff is unable to solve a particular problem, they get help from the Division's experts in such areas as education, social science, and state and local government.

The Division of Field Management sees that the field staff complies with national office policies and guidelines. In addition, it concerns itself with "housekeeping" duties for the field staff, such as problems of supplies, payroll, etc.

In the fulfillment of its administrative and evaluative objectives, the Bureau of Work Programs relates very directly to the other bureaus of the Manpower Administration. Within this constellation of organizations, the Bureau of Work Programs is responsible for administering those programs authorized by the Economic Opportunity Act. That is, the Bureau of Work Programs plays a vital role in the War on Poverty.

LABOR'S ROLE IN UNITED STATES MANPOWER PROGRAMS

Marvin Friedman

The labor movement in the United States today concerns itself not only with economic problems, but with political, social, and international questions as well. In seeking solutions to many of its problems, organized labor works through: (1) collective bargaining, in which the problems peculiar to the work place are discussed; and (2) political action, in which labor pushes for legislation necessary for strong, effective government manpower programs, among others.

Labor recognizes that in an economy where unemployment is high the collective bargaining process alone cannot solve all of its problems. For collective bargaining to be effective, government policy must provide the necessary "framework"--a healthy economy with expanding job opportunities.

Labor and Manpower Training

In moving to a discussion of the relationship of unions to manpower activities, it is important to remember that some unions are more closely tied to these activities than are others. A major reason for this difference in unions' roles is the difference in employment arrangements among industries. In the construction industry, for example, the local union has become the key unifying element in the job market, since this industry is largely comprised of many small employers who hire much temporary help.

When the need for workers varies as markedly as it does in construction, the union becomes the only organization through which qualified labor can be procured and then reallocated efficiently when demand changes. Because the unions in the construction industry must supply labor already trained to perform the required task, they are particularly interested in manpower training--such training generally taking the form of apprenticeship programs.

The manufacturing industries provide an example of another approach of the labor movement to manpower training--an approach less formalized than that of the unions in the construction industry. That the unions' role as developers of manpower skills is not as explicitly defined in manufacturing is explained by the fact that these unions have little or no role in the hiring process. The employer hires whom he wishes, the worker later becoming subject to the terms of the collective bargaining agreement.

The importance of unions to the training process in such a situation becomes evident only upon inspection of this collective bargaining contract. We see that seniority (in terms of length of service) is an important consideration in many decision-making situations. It is frequently a major factor in determining promotions, and we see, thus, that the collective agreement is an effective instrument for upgrading manpower within the plant in an orderly fashion. Many employers might prefer to fill a position by bringing in someone already trained from outside the plant. Manufacturing unions, through their insistence on seniority arrangements, have forced manufacturers to establish training programs within their industries.

The Unions' Relationship to Government Manpower Programs

No single subject concerning government's role in manpower training is more important to labor than the function of the employment service. The "flaws" in the public employment service which we are most interested in correcting are as follows:

1. The "employment service" is actually 50 different employment services, each run by one of our 50 state governments. Many problems arise from this fragmentation, one being that the relatively low wages that many state-run agencies are forced to pay result in the best qualified personnel being drawn to Federal agencies and private industry. The labor movement urges the federalization of the employment service but thus far has lacked the political support needed to achieve this aim.

2. State boundary lines have no relationship to patterns of economic activity. Thus, the state employment services are incapable of supplying adequate information to the worker concerning job opportunities or to the employer concerning the available supply of qualified labor. We argue for a restructuring of the employment service so that its administrative boundaries coincide with the limits of metropolitan labor markets, not of state governments.

Labor is also quite concerned with the administration of the Manpower Development and Training Act. Although many administrators have the proper commitment, too many others abuse this Act in that, to get Congressional appropriations, they emphasize getting large numbers of trainees into the program, overlooking the Act's original aim of moving more people into better paying jobs. The labor movement is interested in seeing public revenue used to train workers for skilled labor and is strongly against using this money to train them to perform low-paying "dead-end" jobs which many will leave at the earliest opportunity. Yet, frequently, it is the latter type of training which occurs under the Manpower Act. Instead of raising skill levels, the application of the Act all too often results in the subsidization of low wage paying employers.

The last six years in my country have seen great advances in human resource development. Legislation such as that dealing with aid to education and that establishing the War on Poverty provides proof of these advances. It has been my purpose in this part of my presentation to point to areas in which improvement still is needed.

MANAGEMENT'S ROLE IN THE UNITED STATES MANPOWER PROGRAM

William F. X. Flynn

The National Association of Manufacturers (NAM) is a voluntary organization of firms and businesses dedicated to the well-being of the nation. The companies we represent account for 80 percent of manufacturing in this country. The NAM seeks to improve living and working standards of all people through programs of education and training. In addition, our organization helps to keep the relationship between government and industry smooth and effective. We work together to accomplish full employment in the United States, a goal that has not yet been fully achieved.

Four percent of the population in the United States is unemployed. Of this 4 percent, the major portion is made up of what we call hard-core or chronic unemployed. To learn more about successful solutions for this type of unemployment problem, the NAM, late in 1964, launched a program called STEP (Solutions to Employment Problems) as a national clearinghouse to evaluate, collect, and disseminate information about proven instances of successful local action. We plan to publish 70 case studies about this problem in the near future.

The problems of these hard-core unemployed are manifold. They are often victims of racial discrimination. They suffer from cultural and educational deprivation; they have not assimilated the values and attitudes of an industrial society which are necessary for them to enter the labor market. As a result, these people lack both the skills and the motivations for employment. In general, the chronically unemployed can be subdivided into five major groupings; they are the functional illiterates (those who possess the minimum ability to read and write), unskilled, unemployed adults (persons with no skills who are unemployed), employed workers with obsolete skills, skilled workers who cannot find jobs, and last, but most important, high school dropouts.

In the American labor force, there are 17 million persons with less than an eighth grade education. We at NAM started programs with companies to upgrade these marginally employed people. In the Harlem section of New York City, we started a pilot program for the youngsters there whose operating levels were well below the fourth grade. After 150 hours of training, they moved up about three grades in language and math skills.

We tried our program at the Argo Corn Products Company. There were 38 employees with an average age of 42 and with an education level of no more than the fourth grade. In a period of 80 classroom hours, their education level increased more than four grades. Many of these men had been with the company for 15 years or more. This training enabled them to get better jobs and, at the same time, to function more effectively in their jobs. In the Chicago area, 41 companies are working on this type program. The steel industry, in cooperation with the labor unions, is trying to upgrade 16,000 people in such programs.

In Rochester, New York, Xerox Corporation went into the ghetto area and took people who normally are not hired and found that these individuals could be trained to work within the Company's program. After 19 weeks of training, they were able to hold jobs in which 40 percent of their time was spent in classrooms and 60 percent in work situations.

Again, there is the employed person who finds his skills are obsolete. Dupont Company (Inc.), in 1959, pioneered the application of programmed instruction techniques to the training of its employees in basic industrial skills. More than 70 programmed instruction courses for production and maintenance employees are in use, and 10,000 employees have completed more than 30,000 courses.

The Prudential Insurance Company of Newark, New Jersey, initiated a work-study program to deal with the problem of the high school dropout. Through this program, one may receive a high school diploma and, at the same time, be employed. Everyone proceeds at his own speed, and almost all the youths have received their diplomas.

In addition to the program in Newark, companies in Racine, Wisconsin, assigned a "big brother" or "big sister"--junior executive volunteer--who works with the student as liaison between the company supervisor and the school teachers.

In Boston, Massachusetts, a program called Job Clearing House was started in the ghetto, working with unemployed individuals. In the last three years, 1,000 have found employment. Out of that 1,000, 85 percent are still on the job, and some have attained promotion.

The role of STEP has not only been to report the business activities and to develop programs for education, but also to put together a total community approach. Such programs as skill-elevation, in-plant literacy training, and redirecting released employees who seek new jobs are helping to upgrade the skills of this country's work force and to maximize human potential. When a community marshals its total resources to mount a coordinated attack on underemployment, the payoff is likely to go far beyond what can be achieved by piecemeal methods.

Local associations or action committees, perhaps comprised of a broad cross section of community leadership, can make use of a variety of STEP resources in solving employment problems. Or, if a local group is in the initial stage of organization, STEP can provide information that will help determine who the underemployed are, what kinds of assistance they need to function more effectively, what resources are presently available in the community, and what facilities might be required. Based on these data, a comprehensive program can be devised to deal with underemployment and unemployment in any local community.

MANPOWER TRAINING IN THE PRIVATE SECTOR

John E. Harmon

Although the role of government and the formal educational system in the multifaceted aspects of manpower training has been significant and increasing, by far the major portion of training in the United States today is carried on and financed by the private sector. It is a serious error to assume that the bulk of manpower training takes place in the formal educational system, for that system merely provides a base for further training. Actual job training occurs in the factory, in the retail store, in the business office, etc. It is nonetheless true that the formal educational system has considerable potential for contributing to the development of well-trained and competent workers, although this potential has not yet been actualized.

One of the most significant reasons for the less than optimal utilization of the formal educational system in job training is the excessive prestige value placed upon the college degree. Most Americans have been deluded into believing a college education is the panacea for both individual and societal ills. It is precisely this misconception which fosters the overemphasis on academic high school subjects with concomitant serious neglect of sound vocational and technical training. The high percentage of high school dropouts in this country is mute testimony to the fact that the contemporary academically-oriented educational system is not meeting the needs of our young people.

No nation can cope with its general economic and manpower problems without generation of certain proportions of highly educated people, regardless of its particular developmental stage. But it is the working man who not only constitutes the bulk of a nation's labor force, but also represents the backbone of that nation's industrial effort. It is imperative, therefore, that the educational system give sufficient attention and make adequate provisions for preparing the working man to supplement and complement the training efforts of the private sector.

The problems arising from the excessive prestige placed upon the college degree are not unique to the United States. These problems are perhaps greatest in developing nations where the "Oxford Diploma" is a paramount prestige symbol. Many of the less-developed countries view the building of colleges and the production of college graduates as a primary medium for social and economic growth. In a situation of limited resources, investment in higher education has often occurred at the expense of vocational and apprenticeship training efforts. Again, although a developing nation will obviously need certain numbers of engineers, physicians, scientists, and various other professionals, their immediate and greatest needs are for skilled workers and craftsmen--bricklayers, carpenters, lathe operators, and the like.

To most effectively and efficiently generate the manpower necessary for an industrializing society, the developing nations would be well-advised to expend considerable efforts in establishing vocational and training centers as well as on-the-job training, retraining, and upgrading programs within the private enterprise.

A recent study in one of this nation's most highly industrialized cities, Pittsburgh, Pennsylvania, found that, although the Pittsburgh school system had a fine general academic high school program, approximately 29 percent of its youngsters failed to complete high school. Second, it was discovered that in order to effectively meet the needs of industries and businesses in Pittsburgh, 109 vocational programs were needed. Of these, 48 could be provided in the high schools, while 61 required post high school education of one or two years.

A sample of 87 Pittsburgh employers indicated that of their anticipated job openings only 6 percent could be filled by individuals having less than a high school education. This demand was insufficient to absorb all of the city's dropouts. Of the projected job openings, 14 percent could be filled by individuals possessing a general high school diploma; 23 percent required high school graduation with some specialized training, such as various clerical or vocational skills; 33 percent required post high school education in vocational-technical skills; and 24 percent required individuals with four years of college or more. This latter figure is highly suspect, however, for personal experience is that employers generally express the need for 2 to 5 percent college graduates.

This and similar studies indicate our educational system needs some serious revamping and reorientation. Much greater emphasis should be placed upon sound vocational-technical training. The prestige of the college degree should not demean the value of the skilled worker. Partly as a result of such studies, cities throughout the United States are beginning to face up to the problems of our educational system and are seriously trying to remedy its deficiencies. Nonetheless, a great deal remains to be done.

Granting that the potentials of the educational system are slowly beginning to produce trained individuals which an industrial society needs, the private sector is still primarily responsible for manpower training in the United States. American employers are spending more than ever before on vocational-technical education, on-the-job training and retraining, and upgrading programs. More and more efforts are made to give proper recognition to and to upgrade the skilled blue-collar workman who does not have a college degree.

In sum, the experiences of both developed and developing nations suggest the need for more realistic approaches to manpower training. Educational systems must be geared to generate individuals who constitute the bulk and backbone of a nation's working force--the skilled workers. Employers should assume ever-increasing responsibility for training and retraining their employees. Only through such cooperative and mutually-supplementary efforts will the human resources of a nation be most effectively and efficiently developed and utilized.

THE INTERNATIONAL FUNCTIONS OF THE DEPARTMENT OF LABOR

Herbert N. Blackman

The Department of Labor's activities in the international field are directed and coordinated by the Assistant Secretary of Labor for International Affairs, George L-P Weaver. They are primarily centered in the Bureau of International Labor Affairs. Experience gained in a wide range of domestic labor activity supports the Department in its international labor policies for the United States Government.

In discharging its responsibilities, the Bureau has provided for utilization of U. S. overseas staff for expert factual and analytical reporting concerning the political, economic, and social problems of overseas labor; research together with the Bureau of Labor Statistics on world-wide labor and manpower development; assistance in formulation of effective foreign policies responsive to the particular labor and manpower situations in countries and regions; and, effective utilization of a variety of specific governmental action programs.

Among the significant international activities in 1967 were:

1. Participation in the negotiations and successful conclusion of the Sixth Multilateral Tariff Conference (Kennedy Round) at Geneva, Switzerland.

2. Participation in the development of a joint policy statement and recommended course of action to improve labor-management relations of overseas U. S. firms.

3. Co-sponsorship with the Department of State of a major conference of U. S. labor attaches in 18 Near East, South Asian, and East Asian countries in New Delhi, India.

4. Work toward implementing the recommendations of a special manpower mission that visited Vietnam in July, 1966. The mission was headed by Assistant Secretary, Leo R. Werts, to study and make recommendations for improved utilization of the manpower resources as they affect economic development of that country.

Through the Assistant Secretary for International Affairs, the Department of Labor continues to play an active role in the work of the International Labor Organization (ILO), the United Nations (UN), and regional economic organizations.

The United States delegation was active in the work of the technical and political committees of the 51st Session of the International Labor Conference.

The Department also participated in a number of regional economic and social organizations.

In the Organization for Economic Cooperation and Development (OECD), the Department of Labor continues to represent the United States in the Manpower and Social Affairs Committee and assisted other government agencies by providing advisors for United States delegates to the Economic Policy Committee, the Scientific and Technical Personnel Committee, and numerous working parties and experts' groups.

The Department of Labor participates in international technical assistance through the Department of Labor International Technical Assistance Corp (DOLITAC). This organization, which is funded by the Agency for International Development, is comprised of labor and manpower specialists concerned with technical assistance overseas. It provides a reservoir of knowledge and experience for AID and other international organizations to help developing countries in achieving sound economic development within the framework of democratic principles and institutions.

DOLITAC is specifically geared to the needs of developing countries and specializes in the fields of manpower planning and administration, labor statistics, labor standards, labor-management relations, and labor ministry administration. During the fiscal year 1967, 58 technical assistance assignments were made in 25 developing countries. The assignments varied from one or two weeks to eight months.

In addition, the Department participates in programs for the training of foreign nationals and cultural exchange coordinated by the Bureau of International Labor Affairs. These programs create a greater understanding of the United States workers' role in the society and provide officials from foreign labor unions, governments, and other organizations with an opportunity to make on-site studies of the people and institutions of this country. During the fiscal year, 1967, the Bureau arranged programs for 868 foreign visitors. Of these, 698 came under the programs of AID; 162 under the cultural exchange program of the Department of State; and 8 were sponsored by other international groups.

The Bureau also directs the Department of Labor's participation in United States' exhibits in other countries. Through the exhibits, the agency tells the story of the American worker--his way of life, his standards of living, the freedoms he enjoys. In 1967, the Department participated in four international fairs: Zagreb, Yugoslavia; Poznan, Poland; Budapest, Hungary; and Bangkok, Thailand. In Poland and Yugoslavia, labor technical seminars were conducted by American specialists.

HUMAN RESOURCES DEVELOPMENT

Martin M. McLaughlin

In the Agency for International Development, it has, perhaps, taken us too long to revive the relatively high priority we once placed on the development of human resources. But we are coming back to it under the spur of President Johnson's stress on three main areas--agriculture, education, and health--all of which relate very directly to human resources, to manpower, to self-help.

The United States Congress has formalized the commitment of this country to the developing nations in the following manner:

> The Congress declares it to be a primary necessity, opportunity, and responsibility of the United States, and consistent with its traditions and ideals, . . . to help make a historic demonstration that economic growth and political democracy can go hand in hand to the end that an enlarged community of free, stable, and self-reliant countries can reduce world tensions and insecurity. . . .

This is the philosophy of the foreign assistance program; it is not, basically, an economic philosophy. I want to speak to you as a person concerned, as you are, with the program that the United States has formulated in helping to assist effectively the progressive development of those countries that the President has determined it is in our interests, within our means, and consistent with this philosophy of ours to help.

One of the first considerations to be emphasized is that we have come, over the years, in AID, to the increasingly strong conviction that a successful development program has to be a partnership, not a donation. The requirement of self-help has been one of our guiding principles. As the President has said: "Self-help is the lifeblood of economic development. No sustained progress is possible without it. Aid provided as a substitute is aid wasted." These are the sentiments of President Johnson, of this Administration, and, we believe, of the American people. Self-help is thus our basic principle, and self-help relates principally to skills and persons, to human resources.

The matter of the training of persons has received increasing attention in the past few years, especially since the passage of the Foreign Assistance Act of 1961. This act states that top priority should be given to the development of human resources.

The participant training component of AID country programs fits squarely within the "priority developmental needs" frame of reference. The emergence of new nations has emphasized the need for human resource development through either academic education or practical and observational training. The AID participant training program is engaged both in developing technical skills and knowledge and in changing attitudes toward development and modernization.

The Office of International Training arranges education and training programs of various kinds for about 8,000 "new" people per year. Our basic reason for this volume is that without human resource development, no amount of other effort or other forms of assistance can achieve the goals toward which you and we are striving.

There are, of course, many other methods of human resource development. Why, then, the stress on training? The main reason is what we call the multiplier effect. This is not Lord Keynes' meaning of the word, but we acknowledge our debt to him for the term, if not the concept. The point is that the trained, highly placed individual is, in the profoundest sense of the term, an agent of change. We are cooperating with your countries in inducing and, in some sense, guiding change--the change you want. An individual who has the capacity to change history is a force that can do more good than a million dollars.

The cost of training individuals is high; it is an investment that you and we make because we have faith in the power of the individual to change history. To train one person, even for a short time (or, more precisely, to help him train himself), may cost as much as the total annual income of several persons in some countries; the money to involve 10 persons in such a program might build a school; for 50 one might substitute a hospital or a small factory. Why, then, do we encourage this training? Because your government and ours have made a judgment that the multiplier effect of such programs will produce many times the material, monetary values represented by a short-term, visible activity like those mentioned above.

I believe that considerations such as these have a particular force for a group like this. Technical training is not enough; even seminar discussions and field trips are not enough by themselves. There has to be a followup. We hope that you will all continue your relationship with us, with each other, with others from your country who have returned from training programs in the United States, and with our missions when you return home. Our technicians in the missions and our training officers--where we still have them--are there to serve you and to help you maximize--or better, optimize--the results of the program and hence your contribution to the economic progress and national development of your countries.

Followup activities have taken many forms: the formation of associations of persons who have returned from such programs; the establishment of publications in which the work of such persons and others can be brought to the attention of their countrymen and thus contribute to development; the establishment of training institutes that permit returnees to multiply their knowledge and skills very directly; conducting lectures, conferences, and seminars for similar educational purposes; continuing membership in American and other professional societies in your fields of interest; etc.

But even more than that, I sometimes feel that, if we have only one exportable commodity, it is the variegated character of our society. We have a bewildering complex of private, voluntary, professional, and other organizations. One of the main values of these groups is that they provide practice in democratic leadership and group activity at the same time that they buffer the citizen, protect him, from too much direct contact with the naked power and authority of government.

For this reason, an effort is made to provide an opportunity for you to become somewhat acquainted with the institutions, the dynamism, and the spirit of the United States. Our democracy, our value system, our open but imperfect and unfinished society, our free economy are laid out before you with all our hopes, our faults, and our accomplishments.

We have accepted the intrinsic risks of the open society, and you have found yourselves here in a time of particular anguish for Americans. You have read and heard about riots, violence, destruction, and death in some of our cities. We are all sad about these events--sad that they took place, sad that you saw them, but especially sad, I think, that social and economic conditions persist in this affluent society that are so grossly unjust that they provoke to violence people who have waited patiently and almost silently for more than a century for the fulfillment of a promise and a hope born out of an earlier and bloodier conflict.

At a time when we are trying to help other peoples abroad help themselves, we are being forcibly and justly reminded of suffering, disease, poverty, ignorance, and injustice in our own country. There is very considerable irony in this--which I feel sure you have not overlooked. But there is also very considerable hope, which I trust you will also note. I think there is a growing recognition that it is not right to make people wait interminably for progress, for justice, for a fair deal. And we do try to do what is right, once we have figured out what it is. I believe that one lesson to be learned from this is that all societies, from the richest to the poorest, have their cancers that must be rooted out. All progress involves pain, struggle, effort, and failure, but also hope, determination, and openness to the new, to the lessons to be gained even in the midst of ruin.

Development is, as everyone agrees, a difficult but a most rewarding task. We have to persevere and try to help build the kind of world that we all want, the kind of world that President Johnson's foreign aid message envisages:

> A world where each nation lives in independence, seeking new ways to provide a better life for its citizens; a world where the energies of its restless peoples are directed toward the works of peace; a world where people are free to build a civilization to liberate the spirit of man.

EIGHTH INTERNATIONAL MANPOWER SEMINAR FIELD TRIP

Prepared by Mrs. Nelly BIAGGI, a member of the Seminar group

The members of the Eighth International Manpower Seminar have had an opportunity to go out of the International Manpower Institute offices to see the United States. For instance, we have had the opportunity to visit points of interest in and about Washington. Each of us was afforded an opportunity to visit American families through the efforts of the Washington International Center. This gave us an opportunity to see "typical" American families and their homes.

We visited the Amalgamated Clothing Workers Union of America at their ground-breaking ceremonies for a day-care center for working mothers. We met the Honorable Jacob Potofsky, International President of that union, and local and state officials. While we were impressed with the cooperation of labor, management, and government officials, some of our countries already have day-care centers provided by law or by the needs of the employees in the private sector. On the other hand, some of us are looking forward to similar developments in our own countries. We realize the importance of such centers if the female members of our societies are to be fully utilized in our active labor force.

One of the highlights of our visit to your country was the participation in the 54th International Convention of the International Association of Personnel in Employment Security, which was held in Richmond, Virginia. On our way to that meeting, we visited the city of Williamsburg. This was an interesting piece of Americana which showed us the beginnings of your country. It made us aware of the fact that you too were once part of a greater colonial power.

At the convention, we met people from all parts of your country, Canada, and other countries. It afforded us an opportunity to meet people who are vitally interested in manpower problems in the United States. We were impressed with the warmth and humanness of Americans. While in Richmond, we met with the Governor of Virginia, Mills Godwin, Jr., and other state and local officials.

We also visited the Reynolds Metals, Inc., where American representatives of big business spoke about their efforts to establish plants in other countries. We visited an automated cigarette factory, a highly mechanized dairy farm where only six people operate a farm which supplies the Richmond area with much of its milk and dairy products. We saw a poultry processing firm, which revealed how little effort is needed to train unskilled workers for specific tasks in an industry which processes 45,000 chickens daily. We were impressed with the cleanliness and rules of hygiene which prevailed in the plant.

From Richmond, we left for New York City. Like all visitors to the United States, we were impressed with this large city. Here we visited both the Bureau of Labor Statistics and the Bureau of Apprenticeship and Training. In both of these organizations, we heard about the efforts which are being made on the city, state, and national levels to involve the disadvantaged citizens in the mainstream of economic and social development. Of course, we visited the points of interest in New York--the Statue of Liberty, the United Nations, the museums, the Empire State Building. Many of us took either sightseeing busses around New York or the boat trip around Manhattan.

From New York, we went to Albuquerque, New Mexico, while the English-speaking group went to Denver.

In Denver, our colleagues visited state Bureau of Employment Security offices. They also visited a smaller agricultural employment office in Greeley. They had a detailed explanation in both offices of how the service tries to meet the employment requirements, both on a regular and on a seasonal basis, for personnel in various communities. In Albuquerque, we had similar experiences in BAT and BES offices. We had an opportunity to see how the United States handles minority problems. In Albuquerque, we met American Indians and Negroes as well as "Anglos" who were looking for work and who were placed by the Employment Service. We actually saw "matching workers with jobs."

In Denver, the group saw the training which is being given to minority or "disadvantaged" groups to meet modern demands by industry. We had a similar experience in Albuquerque where we met with Spanish-speaking people and American Indians who live in poverty. In both communities, we visited vocational or training schools. In most of our countries, we too have adopted training programs for young people who drift into the urban areas. The problems of jobs, homes, and education seem to be universal.

The English-speaking group visited the mint in Denver, the Emily Griffith Opportunity School, and a university at Boulder. We visited the Albuquerque Technical Vocational Institute where underprivileged young people are trained to meet the needs of modern society. While we visited the Heights Opportunity Center, they visited the Youth Opportunity Center--both are devoted to developing the modern teenagers to a point where they can become members of the active labor force of today. Both of us visited modern farms and dairy installations to see how modern America meets its food needs.

In both Albuquerque and in Denver, we met with local, state, and federal officials who impressed on us the need for combined and cooperative approaches so that there will be no overlap or redundant efforts to achieve a single purpose--full employment. In both cities, we visited local homes and were impressed with the hospitality which Americans extend to all visitors. We were also impressed with the efforts which are being made to bring your so-called minority Americans into the current efforts in the manpower field.

Both the English and the Spanish-speaking groups met in Knoxville, Tennessee. Here we visited the Tennessee Valley Authority. The training and social impact of this organization were impressive. We all felt that the community was striving to make the rural areas of the United States as attractive as the urban areas. To make this point more impressive, we visited Lenoir City in Tennessee. This city has more than doubled in population because of the combined efforts of TVA and Lenoir City. We were impressed with the new high school which was built completely by local effort. The mayor pointed out that he had received the keys to the high school only the day before our visit. We were impressed by the fully-equipped laboratories, kitchens, classrooms, and gymnasiums which the new school boasted.

From Knoxville, we returned to Washington to resume our Seminar activities.

NINTH INTERNATIONAL MANPOWER SEMINAR FIELD TRIP

Prepared by Raphael Brown of the International Manpower Institute

An important part of the Ninth International Manpower Seminar was devoted to an analysis of the manpower problems, policies, and programs in the United States. Representatives of the government and the private sector outlined the problems which have and still do confront America and traced the development of the policies and programs which have evolved to cope with the problems. The lectures served as a background for field visits to various cities where the Seminar members had an opportunity to observe the functioning of the programs.

In order to facilitate the field trip, the Seminar was divided into two groups--an English-speaking group and a French-speaking group. The English-speaking group visited Minneapolis-St. Paul, Minnesota, and Sioux City, Iowa; the French-speaking group visited St. Louis, Missouri, and Little Rock, Arkansas. Both groups then met at Michigan State University in East Lansing, Michigan. On the return to Washington, D. C., they stopped in Buffalo, New York, and made a side trip to Canada.

The emphasis throughout the field trip was on the cooperation of local, state and federal governments in conjunction with institutions and private enterprises to achieve economic and social growth, foster employment opportunities, and develop training and skill acquisition programs, particularly in the area of the disadvantaged sector of the population. They met with human resource and manpower planning boards and visited employment service offices, apprenticeship councils, schools and training centers, and industrial plants. Both the English-speaking and the

French-speaking groups also visited farms and rural areas to observe the effects of mechanization on manpower in food production.

In Minneapolis-St. Paul, the English-speaking group met with the Advisory Council for the Minnesota Department of Employment Security, where they were addressed by Dr. Herbert Heneman, Director of Industrial Relations for the University of Minnesota. They also participated in a panel discussion of the Minnesota State Employment Service on "A Community's Manpower Agency." Here, local human resource development concepts were discussed. Among the topics included were: Manpower Training, The Operation of the Economic Opportunity Act, Services to Special Applicant Groups, Minority Groups, and How the Minnesota State Employment Service Meets the Needs of the Community. Commissioner George J. Valvoulis presided at this panel.

The group visited the Metropolitan Office of the Minneapolis State Employment Service to see firsthand how it handles job applicants from the initial registration through the final placement on a job. They then toured the Minneapolis Honeywell Golden Valley Industrial Plant, where the on-the-job and apprenticeship programs of that organization were observed and discussed. The group also visited the St. Paul Technical Vocational Institute. Here they saw a different approach to training and skill acquisition. Ralph Dallman, State Supervisor of Apprenticeship and Training, explained the State's role in developing trainees for the demands of the community. The contribution of the financial sector to community development was explained in a visit to First National Bank in St. Paul by Perrie Boliou, Vice-President for Personnel.

A special meeting on "The Status of Women" was arranged in Minneapolis. The principle speakers were Miss Mary Manning, Regional Director of the Women's Bureau of the U. S. Department of Labor, and Mrs. Beverly Stone, Consultant to the Women's Division of the Minnesota Department of Human Rights.

From Minnesota, the English-speaking group traveled to Sioux City, Iowa. Here they met with the mayor and the city council to discuss the local approaches to "full employment." In Iowa, the group visited an agricultural office of the Iowa State Employment Service. They also visited Western Iowa Technical Institute to observe Manpower Development and Training Act projects. This visit tied in with a discussion on "Poverty and the Disadvantaged" by a representative of the Community Action Program. In connection with the latter program, the group toured the Indian and Sanford Centers. On the last day in Sioux City, the group met with representatives of the trade union movement for a discussion of "Trade Union Apprenticeship." They also visited Morningside College, which is cooperating with the State Employment Service in placing students in jobs.

While the English-speaking group was in Minnesota and Iowa, the French-speaking group visited St. Louis, Missouri, and Little Rock, Arkansas. In St. Louis, this group met with the mayor of St. Louis, who touched on the employment and growth problems facing St. Louis. The first day was then devoted to apprenticeship programs. After a general briefing of the St. Louis apprenticeship program by the local field representative, the group attended a meeting of the Apprenticeship Council, where problems of apprentices in the electrical industry were discussed. This was followed by a visit to a trade school maintained by the Building Trades Division of the AFL-CIO and the Associated General Contractors. The group also visited the O'Fallon Technical High School which is part of the Board of Education's program to train young people to meet current demands for craftsmen.

The second day was arranged by the State Employment Service. The group visited a local employment office to see the general operations. They then visited two "outstations" in poverty areas to see what the local, state, and federal governments are doing to reach disadvantaged members of the community. They also toured a local television station--KMOX-TV--which has daily programs announcing jobs that are available, and the minimum qualifications to meet those jobs.

The third day was devoted to programs for the training and employment of disadvantaged youth. They visited an office of Economic Opportunity Organization--The Human Development Corporation--where OEO programs were described. They then visited local schools which are participating in this program, a Neighborhood Youth Corps project and a Concentrated Employment Program project. The visit to St. Louis was concluded at a YWCA tea where "Womanpower in the United States" was the topic of discussion. Mrs. Anna Lee Scott of the YWCA and Mrs. Roberta W. Lee of the Juvenile Court of St. Louis were the principal speakers.

In Little Rock, the group was met at the airport by members of the International Association of Employees in Employment Security. Their introduction to Little Rock was an orientation meeting in the Metropolitan Office of the Arkansas Employment Service. Here they toured local employment service offices. They then met with members of the Bureau of Apprenticeship and Training and with members of the Urban League, where they discussed the local "Skills Bank"and the"Outreach Program" for assisting people to become "participating members in the active labor force." In Little Rock, the group visited the State Capitol and spoke with members of the Governor's staff regarding the State's interest in manpower problems.

The group visited Little Rock High School and the Little Rock Vocational Technical School. They also visited a Youth Opportunity Center, the Opportunity Industrialization Center, and the Economic Opportunity Agency. The final visit in Little Rock was to a dairy farm, where mechanical milkers and feeders have replaced many "farm hands."

Both language groups met at Michigan State University, where a program was prepared to coordinate the visits to the four communities and to discuss the University's approach to manpower problems of today. A week was spent at the University, where the program included a day on "Rural Manpower Problems," which involved a tour of the Michigan State University Experimental Farms. The second day was devoted to "Urban Manpower Problems." Another day was devoted to "The U. S. Contribution to Manpower Problems in Developing Countries." The fourth day dealt with problems of "Youth, Education, and Employment." On the last day, the topic was "Communication at Various Levels."

In each community, the members of the Seminar visited points of historic and cultural interest. They were the guests at luncheons and banquets at which they met with Americans who were interested in world affairs. In each community, members of the Seminar were invited to homes where they could see how American families live and could discuss points of mutual interest. The local chapters of the International Association of Personnel in Employment Security arranged social functions in each city which was visited.

The field visits afforded the Seminar members an opportunity to bring into perspective the efforts which are being made by the United States to solve the current manpower problems through active manpower and employment policies and programs.

PART VI

Project Aurora

GENERAL NATURE AND PURPOSE OF PROJECT AURORA

The members of the Eighth and Ninth International Manpower Seminars participated in group case studies which included development and manpower plans for the synthetic developing country of Aurora. This offered the members of the Seminars an opportunity to put to practical use the experience, information, and background material which they had brought from their own countries, combined with concepts and ideas gleaned from the Seminar discussions and field observation trips. Each member of the Seminars acted as an international "manpower advisor" assigned to the imaginary country for a short detail to assist in its program for social and economic development.

To provide a realistic setting for the case studies, the staff of the International Manpower Institute assumed the roles of officials in the Government of Aurora, with Ealton L. Nelson of the Office of Labor Affairs of AID as the "President." For immediate assistance, Charles N. Meyers of Education and World Affairs served as the "Manpower Specialist" for Aurora in the Eighth International Manpower Seminar. In the Ninth International Manpower Seminar, Eugene W. Burgess of the School of Business Administration at the University of California in Berkeley had a similar role.

In order to facilitate the activities of the group case studies, the participants in each Seminar were divided into four groups or workshops.

EIGHTH INTERNATIONAL MANPOWER SEMINAR

Group I

Albert L. T. HSU
Subodh K. MALLICK, I.C.S.
Samuel O. FALAE
Ehtisham ALAM
Vichitr SANGTONG
Crescencio M. SIDDAYAO

Group II

Augusto Rafael MACHADO
Sergio Marinho BARBOSA
Jaime A. ARCHILA S.
Ramon O. RAMIREZ B.
Hugo ALEMAN
José LEMBCKE

Group III

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Boris CHACÓN
Carlos E. VIRVIESCAS P.
Nelly BIAGGI M.
Hugo R. MENDEZ
Juan M. ACARREGUI

Group IV

Nilton Seixas NECCHI
Ernesto MEZA
Pablo FRANKY V.
Juan ZAVALA Y.
Pablo Ulises GOMEZ
Aurora CORSEN V.
Rómulo MARTINEZ

NINTH INTERNATIONAL MANPOWER SEMINAR

Group I

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Yuyi K. LIBAKENI
Edna G. DAVIS
VACHARI Ransibrahmanakul
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Basudeo Prasad LOHANI

Group III

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Pham Nguyen HANH
Amadou N'DIAYE
Pierre TCHICAYA
Joseph BUNDU
Alexis BASSAN-VILLASCO
Theodore MOUROUTIS
Blaise G. K. AMEGNAGLO

Group IV

Luu The HUYEN
Tran Kim KINH
Seydou KONATE
Huynh Cong CAN
Emile BEANJARA
Driss LOUBARIS
James Sewa LASSEY
Jacques René TSIZAZA

The members of each group were provided with a general description of the geographic, anthropological, social, and economic conditions of the country. They were also given the development program which Aurora had drawn up and were told of the goals and aspirations which the country hoped to attain. Based on the background material, the groups were asked to analyze the program and the manpower implications of the goals. Some of the areas they were asked to consider were:

> Are the goals attainable based on the statistics and data available?
>
> Was the development and planning scientific and realistic?
>
> What do the advisors recommend to Aurora to improve basic policy formation and specific approaches for manpower development?

The second phase of the exercise dealt with problems in planning and programs facing Aurora. The groups were asked to make an analysis of the current manpower requirements and data for projections of the country's requirements. A similar analysis was to be made of the education and training systems to meet Aurora's manpower needs. Other points to consider were the population and migration patterns of the country; the efforts necessary for job creation and maximizing the overall productive employment, including the balance between labor-intensive versus capital-intensive programs. In this phase, agriculture and rural development were stressed, as were approaches to the solving of urban problems.

In the final phase of the Aurora project, the groups were asked to prepare manpower plans for the country. The plans were to set forth the basic development policies, the major goals and targets, and the means for implementing the plans and programs to meet the goals.

REPORT ON PHASE I--PROJECT AURORA--TYPICAL GROUP REPORT

This report is presented in outline form for a more graphic picture of Aurora and its present economic condition. The group of experts assigned to study the economic and human resources situation considered all facts and statistics contained in the document, "Project Aurora." It revealed the highlights outlined below. The latter portion of the report carries the analysis and recommendations.

Problems of Aurora

A. High rate of population growth which is 3 percent per annum.

B. Forty percent of the total population is under 15 years of age. This indicates a high dependency ratio and, consequently, a need for more investments in education.

C. Aurora is faced with the problem of unemployment which at 2 percent (of the labor force) is reportedly understated and also tended to cover up a great deal of underemployment.

D. Illiteracy, which is placed at 73 percent for the population over 7 years of age.

E. Inadequate facilities for education and training.

F. Lack of skilled manpower.

G. Tendency towards rural-urban migration.

H. Labor unrest.

I. Balance of payments problems.

J. Organizational problems related to manpower planning and implementation.

K. Social and political problems of the minority group, the Parvs, comprising 10 percent of the total population.

Development Goals of Aurora

A. Decreased dependence on agriculture and increased industrialization.

B. Increased productivity for both industry and agriculture.

C. Reduced rate of increase of unemployment by 50 percent during the five-year plan.

D. Increased GNP from 2.7 billion pounds in 1966 to 3.8 billion pounds in 1971, at the rate of 7 percent per year.

E. Raised literacy rate.

F. Strengthened on-the-job training program.

G. Improved balance of payments situation.

Alternative Choices

A. Labor-intensive approach; justification:

1. Aurora is basically agricultural, and a large proportion of the population depends upon it for their livelihood.

2. Because of the limited supply of foreign exchange, the country should utilize its manpower resources rather than spend heavily for foreign-made machinery.

3. Agriculture can be made more scientific and more productive while retaining its labor intensity.

B. Measures to promote labor intensity:

1. Review targets in the five-year plan to give priority to labor-intensive schemes.

2. Examine carefully the indirect employment potentials of capital-intensive equipment.

3. Control imports and credit to the extent that this will enforce a labor-intensive policy.

4. Establish new labor-intensive industries through coordination among appropriate ministries.

5. Train top personnel on modern scientific labor-intensive agricultural practices.

6. Prohibit importation and local manufacture of heavy labor-saving agricultural machinery.

7. Increase area under cultivation by utilizing underemployed labor.

8. Restrict dismissals unless employers assure replacements and maintain payroll at same or higher level.

9. Adopt two-or-three-shift operation.

C. Arguments against labor-intensive approach

1. Labor-intensive approach is predicated on generally inefficient or second-rate technology.

2. The approach is costly in the long run.

3. The program is good only in theory and impractical of implementation due to lack of skilled administrators and staff personnel.

Analysis of Development Goals and Manpower Implications; Recommendations

1. Aurora is committed to the policy of decreased dependence on agriculture and increased industrialization. As indicated in the five-year plan's projection of the GNP, the contribution of agriculture is expected to decrease from 43.2 percent in 1968 to 37.9 percent in 1971, the decrease to be compensated by increases in nonagricultural industries, principally manufacturing, transport and communications, commerce and industry, and energy. The group observed, however, that the plan carries no statement on specific measures to achieve the policy.

Under the present state of Aurora's development, this policy is bound to have adverse effects on the manpower situation for the following reasons:

a. Aurora is basically agricultural. In fact, the agricultural sector provides close to 50 percent of the national income and accounts for 85 percent of Aurora's exports.

b. About 75 percent of the labor force is in the agricultural sector and to deemphasize dependence on it may result in the worsening of the unemployment problem.

c. Agriculture should be developed to provide the raw materials needed by nonagricultural industries and to assure a stable market for its products.

d. Considering the fact that Aurora's exports come from agriculture, improvement of this sector will help reduce the balance of payments problems. An improvement of the export industry will help earn more foreign exchange for the country.

Extreme emphasis on either sector of the economy will not help solve the problems of the country. A balanced scheme, taking into account the country's available resources, is considered more appropriate.

2. Another goal of Aurora is to increase productivity for both industry and agriculture. Again, very little reference is made to the measures necessary to achieve this goal. Specifically, planners suggest a reorganization of state-owned enterprises which account for about half of Aurora's industrial production. The group observed that this is inadequate and, therefore, suggests that to increase productivity of agriculture the following measures should be undertaken:

a. Use improved seeds, fertilizers, pesticides, etc.

b. Bring more land under cultivation.

c. Adapt scientific techniques.

d. Improve irrigation system.

On the other hand, industry can be made more productive through the following proposals:

a. Use improved technology.

b. Improve quality of personnel.

c. Improve labor-management relations.

3. Reduction of the rate of increase of unemployment by as much as 50 percent is a desirable goal, but the plan itself did not spell out the means to achieve this goal. Thus, the group recommends the following measures:

a. Undertake road building and other public works programs.

b. Introduce and develop small industries and homecrafts in the rural areas.

c. Conduct labor force surveys to determine levels of unemployment and underemployment.

4. As to the problem of illiteracy, it is not very surprising for it to reach the 73 percent level (for population over 7 years of age) because 45 percent of Aurora's villages have no schools. All intermediate and high schools are located in towns and cities. While Aurora tries to remedy the problem through compulsory education, there are no schools to meet the needs of its people. The group, therefore, recommends the following;

a. Open schools in rural areas.

b. Use radio and mass media for education.

5. Aurorans hope to eliminate the balance of payments problems by greater exploitation of mineral resources for export. This may be a desirable goal, but we have no information regarding Aurora's mineral resources.

The group, therefore, recommends a survey to find out what minerals are available which can be exploited on a commercial scale.

6. The five-year plan aims to strengthen on-the-job training programs through measures, among others, making training compulsory in large establishments. The group believes that this might bring about some negative effects. To avoid this, it is felt that the government may use the promotional and persuasive approach by getting them involved in the planning stage and convincing them of the benefits that will pay off in the long run for the costs of training.

Comment on the Manpower Planning Process

On the question of the approach to development and manpower planning, the group believes that it is far from scientific, and the plan needs more realism. This is not surprising as the basic plan was prepared by engineers and industrial technologists with no coordination with manpower specialists. This is not to mention the fact that the so-called plan had to be developed without the support of adequate and accurate statistics. Further, the manpower organization, its functions, role, and responsibility, needs a reexamination for it to perform its role as a staff agency as distinguished from that of the various operating agencies. The group observed that the Central Planning Agency anticipates having operating functions as borne out by the fact that the Customs Bureau and banks should consult the Planning Agency before they decide on individual cases involving large amounts of money earmarked for imports. This is carrying its role too far as the highest planning body of Aurora.

Concluding Statements

Obviously, Aurora is a developing country anxious to industrialize. Considering its available resources and potentials, Aurora is rather ambitious and in a hurry to industrialize. However, the country should not lose sight of agriculture, its base, which should likewise be developed to keep pace with developments in the nonagricultural sector.

Finally, we feel there is no plan to speak of. For in the strictest sense of the term, a plan must carry statements of two important elements, namely, ends and means. While Aurora has development goals to meet current problems, no mention is made of the measures to achieve the goals. Some of the goals, in fact, are mere hopes. In other words, the planners express the ends but are silent on the means to obtain such ends. Be that as it may, the group has made the most of all available facts and information which, in most cases, has to be taken at face value.

PHASE II: MANPOWER PROBLEMS

A study of the development plan of Aurora reveals that Auroran planners plan, or should plan, to achieve the following social and development goals:

1. Substantial increase of its GNP at the rate of between 5-7 percent per year to enable appreciable improvement of the living standards of Aurorans.

2. Development of both agricultural and nonagricultural sectors of the economy in such a way that both sectors will function in a complementary manner, having regard to the current importance of agriculture in the economy.

3. Elimination of balance of payments deficit within a ten-year period by greater exploitation and export of its mineral resources.

4. Considerable increase in productivity both in Auroran industries and agriculture to enable the achievement of the set global rate of growth.

5. Effective utilization of Auroran human resources aimed at the achievement of full employment.

6. Substantial development in all levels of education and training in Aurora to equip Aurorans with the knowledge and skills needed to promote growth and modernization.

It is the considered view of the group that developments in the educational and training systems in Aurora must be geared to the production of the various types of manpower which would carry out the set development taxes necessary for the achievement of the above goals.

The group would, therefore, approach its task of proposing the means of increasing the supply and improving of quality of trained and skilled manpower by:

1. Examining the present situation in Aurora with regard to each of the levels of education and training.
2. Identifying the problems.
3. Proposing recommendations.

Analysis of Aspects of Education and Training in Aurora

The aspects or levels of education and training which the group has indentified for examination are the following:

1. Literacy
2. Primary education
3. Vocational education and training
4. Secondary education
5. Technical education and training
6. University education
7. Apprenticeship and on-the-job training

Literacy in Aurora

Present Situation. The census of 1964 shows that 73 percent of Aurorans over seven years of age were illiterate. Literacy is said to be higher in urban areas than in the rural areas.

The Problem. It is considered that illiteracy rate of 73 percent is indeed too high and that for a country like Aurora, if the problem is not attacked directly, then it will become a major obstacle to the achievement of development goals. In the rural areas, for example, a high degree of illiteracy can seriously impede efforts to improve the productivity on the farms and, therefore, food production. In the urban areas, it could lead to politically and socially unstable situations which can seriously delay the achievement of the set of development goals.

Recommendations. The group recommends that the problem of illiteracy in Aurora should be attacked in a massive manner by the creation of local groups and committees of devoted community leaders of thought, who will have the responsibility of organizing and promoting literacy campaigns in their individual districts in the country. The work of these committees will be coordinated at the national level in a separate division of the Ministry of Education which should be furnished adequate resources to provide the financial and technical requirements of the local committees.

The committees may carry out the following functions:

1. Securing the services of local teachers and civil servants who would be persuaded to contribute a few hours of their leisure voluntarily each week for the teaching of the illiterates in their areas.

2. Massive and effective use of the radio and visual aids as a means of imparting basic education and knowledge of skills. This is where the national authority could play a very useful role by providing the technical requirements.

3. Massive circulation of reading materials in the local dialects spoken in Aurora.

The group further recommends that the government, through the coordinating authority, should set itself targets within a definite program designed to wipe out illiteracy in Aurora and should work towards the achievement of the targets.

Primary Education

Present Situation. Auroran primary schools have a 5-year curriculum of elementary education, nominally compulsory and free for children from 6 to 14 years. There are many villages without schools and, therefore, many children who do not attend school. Twenty-three percent of Auroran villages have no schools.

Problems. The group identifies the following problems with regard to primary education in Aurora:

1. Lack of effective planning.
2. Shortage of finance.
3. Shortage of teachers.
4. Large numbers of dropouts.
5. Lack of desire for education by a section of the population.

The group feels that the problem of illiteracy in Aurora could be alleviated or worsened according to the way in which primary education is planned and executed. It is, therefore, important that urgent measures based on the following recommendations be taken to solve the problems.

Recommendations.

1. Greater sums of money in the national budget earmarked for education should be expended on primary education.

2. More schools should be created in the Auroran villages. In this connection, the group is of the view that the Auroran government's free primary education scheme is rather premature in view of the budgeting constraints that the government has to contend with in regard to other pressing development requirements.

3. The content and philosophy of primary education should be related more to the environment of the children. The process should include orientation of the children to appreciate rural living and development.

Vocational Training

Present Situation. The Auroran documents indicate that 1 percent of the population, or approximately 140,000 Aurorans (in 1964), had some vocational schooling.

Existing vocational institutions with four-, five-, and six-year programs accept both primary and intermediate school graduates.

It is also mentioned that the establishment of 100 vocational training centers is contemplated during the five-year plan. These centers will be expected to train 40,000 persons per year. Those to be trained will be primarily foremen and workers who are skilled or who can be promoted to skilled jobs. The training courses are planned to run for six months.

Problems. Auroran planners have not furnished the following important facts and figures regarding the existing vocational centers:

1. Number and distribution of existing vocational centers.
2. Enrollment in the existing centers.

In spite of unavailability of these facts, it is clear, however, that Aurora has not yet established the plans for the development of a vocational and training system designed to meet her development needs. That the Auroran planners have recognized this fact is expressed in their desire to establish 100 vocational training centers with expected turnout of 40,000 persons per year. The document does not, however, indicate how this ambitious project is to be carried out.

Recommendations.

1. In view of this lack of basic facts and figures on vocational training in Aurora, it is recommended that a study group be set up to examine and determine the needs of Auroran establishments and industries in the area of vocational training.

2. On the basis of the recommendations of the study group, a suitable system of vocational training should be designed with the full participation of representatives of all types of industries.

3. As a matter of utmost urgency, a training scheme designed to produce Auroran instructors who will teach in these schools should be formulated.

4. Vocational centers may then be planned and developed in areas which have been predetermined on the basis of economic priorities. The number of centers initially planned will depend on available resources for such projects within the development and the training needs. In this connection, it is recommended that early assistance be sought from appropriate international agencies for the provision of staff and equipment.

5. The training courses should reflect the present and future needs of industrial development. Thus, the needs of such developing sectors as mining and quarrying, energy, manufacturing, construction and agriculture should be particularly taken into account.

Secondary Education

Present Situation. The Auroran development document mentions that about 2 percent of Auroran labor force had some secondary schooling (according to the 1964 statistics). Secondary education in Aurora is of six years duration--three years intermediate school and three of upper school.

Courses of study in secondary schools are commercial, technical, and classical. When the student has completed his primary five and secondary six, he may take a comprehensive examination for admission to a university.

All of the country's intermediate and high schools are located in towns and cities.

Problems.

1. Here again the Auroran report does not contain statistics regarding the number and distribution of secondary schools in the country. It is, therefore, not possible to know the output of secondary schools in Aurora.

2. The report mentions that only 2 percent of Aurorans in the labor force had secondary education in 1964. This is a very low percentage for a country aspiring to achieve high levels of social and economic growth.

3. The imbalance in the manpower structure as indicated by Aurora,in which class A manpower is much larger in terms of numbers than the middle-level, appears to be directly related to the short supply of secondary school graduates.

Recommendations. A survey of the needs of secondary education in Aurora should be undertaken with a view to planning for:

1. Adequate supply of trainees for middle-level technical and professional training designed to meet the shortage of middle-level manpower in Aurora.

2. Adequate and suitable material for entry into Auroran universities in the fields of knowledge and skills essential for the achievement of Auroran development goals.

3. The training of suitable and adequate number of graduate teachers to teach the various secondary school courses. Use of foreign teachers, for example, Peace Corps, could be immediately arranged to bridge the gap until Auroran teachers became available in sufficient numbers.

4. Creation of secondary schools in the rural areas to meet the needs of the children of agricultural workers and to help or slow down population drift to the towns and cities.

University Education

Present Situation. Aurora has four universities. Three of these offer most university courses including science and medicine, and one, the Technical University of Auropolis, specializes in Engineering and Technology. Auroran planners estimate that less than .5 percent Aurorans in the labor force (in 1964) had university education.

Problems.

1. There is a lack of statistics with regard to enrollment in the universities and output of graduates in the various fields. These basic facts are necessary in determining the extent to which the universities are meeting the high-level manpower needs of Aurora.

2. From the projected needs in the Auroran report with regard to high-level manpower needs, it is clear the demand for university training is considerable, more so, considering the fact that less than .5 percent of Aurorans in the labor force (in 1964) had university education.

3. Again, all the universities are situated in the major cities of Aurora. This sort of situation also tends to aggravate the problems arising from over-population of the urban areas.

Recommendations. As in the other levels of education, some expert study of Auroran universities is recommended for the purpose of planning for:

1. The effective development and utilization of existing facilities in these universities in the direction dictated by the present and future development needs of the country.

2. Future universities should be situated outside of the major towns and cities to facilitate balanced development of the regions of Aurora.

3. As in the case of other levels of education in Aurora, there is a critical need for Auroran planners to obtain and maintain comprehensive statistics covering enrollment and graduates from these universities in the various courses. This is indispensable for planning. The assistance of international agencies such as UNESCO can be sought in establishing the basis of compilation and maintaining of all statistics relevant to education.

Technical Education

Present Situation. Here again the documents from Aurora have provided very little information as to the availability of facilities for technical education and training in Aurora. The documents merely indicate that courses given in Aurora's secondary schools include technical courses. No more is said about this subject.

Problems. Auroran needs in terms of technical middle-level personnel are considerable. This is evident in the statistics furnished by Aurora, which indicate a serious shortage at this level of manpower in the country.

Recommendations. The group, therefore, recommends:

1. The appointment of an expert study group to examine the whole question of technical education and training in Aurora, having regard to overall development needs of the country.

2. On the basis of the findings, a system of technical education geared to the development needs of Aurora should be planned.

3. International assistance in terms of teaching staff and equipment for the colleges should be sought while establishing at the same time a training scheme for the training of Auroran instructors.

4. Industries should be persuaded to participate actively in the planning and running of these schools to ensure that they will keep pace with the changing manpower needs of industrial processes.

Manpower Structure in Aurora

Present Situation. A study of tables submitted by the Auroran Government reveals serious imbalances between the employment of high-level manpower and middle-level manpower in all the sectors of the Auroran economy.

For example, in the agricultural sector we have found that the category ratio of high-level manpower and middle-level manpower is roughly 6:1, i.e. six high-level agriculturists to one middle-level agricultural worker or technician or extension worker. This indicates an awkward situation in an economy which is substantially agricultural. In fact, the reverse ratio of 1:6 should be the case.

Recommendations. The group is convinced that these imbalances are largely the result of lack of wage incentives to attract Auroran young men and women into fields in which serious shortages are experienced.

It is, therefore, recommended that Auroran government should apply suitable incentives in terms of wages, status, etc. to attract qualified Aurorans into the areas of greatest needs in order to remove these bottlenecks.

Apprenticeship and On-the-Job Training

Present Condition. Too little attention has been given to the training of the unemployed and upgrading the skills of those already employed. The present educational facilities have not produced the base from which to draw the manpower to be trained for particular occupations. In other words, the education and training system as found in Aurora does not have the capacity to meet projected development needs. The five-year plan, however, has placed major reliance on its educational system to meet the need for skilled manpower. The plan expects the number of students in secondary education to increase by 78 percent, compared to 102 percent in the primary, 180 percent in general higher education, and 740 percent in higher technical education. Further, the proportion of students in secondary schools receiving technical or professional education is expected to change from 31 percent to 58 percent in 15 years.

Aurora plans to establish a system of vocational training centers to train persons who have left the student category and have entered the labor force. It is hoped that 100 training centers will be established during the five-year plan. If fully developed and staffed, the centers will be able to train 40,000 persons per year. The objective is to train foremen and workers in skilled jobs. In selecting workers for training in the centers, preference will be given to graduates of technical schools who are not employed.

Not all of the technical personnel can be trained in the centers due to financial and personnel limitations. Thus, the plan is to have large numbers trained in industry and on-the-job where training responsibility properly belongs.

The five-year plan provides measures to strengthen the on-the-job program:

1. A law should be adopted making training compulsory in large establishments.

2. Formation of skilled workers, foremen, and technicians should be defined precisely and appropriate training given.

3. Qualification of persons completing training should be certified by an official government certificate and wages set accordingly.

4. On-the-job training courses should be standardized throughout the country.

5. Greater social value should be accorded skilled work.

Problems.

1. No data on output of secondary schools: commercial, technical, and classical.

2. Only 25 percent of the labor force is active in the nonagricultural sector: trade union membership is small in proportion to entire labor force. About 10 percent of the total labor force is organized. If any on-the-job provision should be included in the collective bargaining contracts, only a small proportion would stand to benefit from such provision.

3. No data on specific manpower problems, particularly real area problems, are available.

4. Higher prestige value given to white-collar jobs than to technical, mechanical, or craftsmen-type employment. It is noted that the latter group is in critically short supply, which is precisely the group needed for economic development.

5. The present education and training system is not in a position to meet projected development needs. This points to the need for expanding the educational system.

6. Many graduates of technical and professional schools do not work in the field for which they were trained (why?). This is attributed to poor coordination between technical schools and employers of educated personnel. The five-year plan wants to improve this coordination.

7. Training is limited by financial and personnel resources. The government looks to employers to train large numbers in industry and on-the-job.

8. No reference is made to any specific state agency responsible for coordination and conduct of worker training responsibility.

9. Productivity must be increased in the agricultural sector, which claims a large portion of the manpower, in order to release more manpower for industry in the future.

Recommendations.

1. Establishment of effective and adequate employment service systems. Such will take care of, among others, proper placement of workers and necessary vocational guidance and employment counseling.

2. Institute a training program for workers in agriculture from which industry will eventually draw its manpower.

3. Study occupational wage structure with a view to providing necessary wage incentives to people with skills in critical shortage in relation to economic development goals.

4. Improve the basic educational system from which is drawn trainable manpower.

5. Include on-the-job training in collective bargaining contracts.

6. Adopt the promotional and persuasive approach in training by getting representatives of management and labor into government manpower planning and implementation programs.

7. Establish a central training authority where the representatives cited in number 6 (above) can be made to participate. Such authority should be responsible for determining training policies and establishing priorities and allocation of limited resources, as well as coordination at the top level of all training activities in the whole setup.

8. Utilize mass media to enhance the position of blue-collar jobs.

PHASE III: FINAL MANPOWER PLAN FOR AURORA

This plan represents a blueprint for the development of the Auroran economy, particularly its human resources, for the period 1967-1971. In preparing it, the team of experts took into account pertinent characteristics of the country, particularly its geography, population, its growth rate and age distribution, rural-urban distribution, political setup, trade, educational system, labor-management relations, financial and other resources, institutional facilities, and, of course, human resource problems including social and political implications.

Current Situations

Aurora is a developing nation of about 200,000 square kilometers and a population of roughly 14 million which grows at an annual rate of 3 percent. Close to 40 percent of the population is under 15 years of age. About one-third of the total inhabitants live in urban areas. The minority group, the Parvs, comprises 10 percent of the total population.

Before the country adopted its present Republican form of government, it had been under foreign control, which influenced local culture.

Aurora's gross national product as of 1966 was placed at 2.7 billion Auroran pounds. It expects this to increase at the rate of 7 percent annually to 3.8 billion pounds in 1971.

The country is basically engaged in agriculture; it derives close to 50 percent of its national income from this sector. This sector also accounts for 85 percent of Aurora's exports, which are principally fruits, nuts, and oils. Cotton ranks high among the exports of manufactured products. For six years since 1960, Aurora's trade deficits ran between 50 and 70 million pounds annually, which the country hopes to remedy through exploiting certain mineral resources like titanium.

Census reports of 1964 indicated that of the 14 million total population, nearly 6.5 million were economically active and 2 percent were unemployed. This percentage is believed conservative considering the fact that three-fourths of the labor force is on the farm, and this does not reveal the great proportion of underemployment prevalent in the land.

The 1964 census reports also reveal that 73 percent of the total population over 7 years of age is illiterate. Literacy is relatively high in the urban areas. This is not surprising, because all intermediate and high schools are located in towns and cities while 45 percent of the villages have no schools at all except for a few religious schools.

Elementary education which is free and compulsory for children aged 6 to 14 years has only a five-year curriculum. Secondary education, on the other hand, is of six-year duration. There are three teacher-training institutes in the country which graduate approximately 1,500 teachers each year.

Aurora has four universities, three of which offer most university courses. One technical university specializes in engineering and technology.

In the field of labor-management relations, Aurora has not gone far. Less than 10 percent of the total labor force is organized.

The Problems

Looking at the economy as a whole, the team pinpointed several basic problems which, for purposes of reporting, have been grouped roughly into the following categories:

I. Problems related to manpower

A. High rate of population growth which is placed at 3 percent per annum.

B. Forty percent of the total population is under 15 years of age, indicating a high dependency ratio, consequently requiring large amounts for consumption expenditures and more investments in education.

C. Aurora is faced with the problem of unemployment which at 2 percent (of the labor force) is reportedly understated and also tends to cover a great deal of underemployment.

D. High rate of illiteracy which is 73 percent for the population over 7 years of age.

E. Inadequate resources and facilities for education and training, in terms of school buildings, funds, equipment, and teachers.

F. Lack of skilled manpower.

G. Tendency toward rural-to-urban migration.

H. Organizational problems on planning and implementation.

I. Lack of data and information necessary for planning and development.

II. Problems other than those on manpower

A. Balance of payments problems.

B. Social and political problems of the minority group, the Parvs, comprising 10 percent of the total population.

Major Goals and Specific Programs

The primary emphasis for this plan for the next five years, which is proposed in the specific programs summarized below, covers the means of increasing supply and improving quality of trained and skilled manpower. Thus, as a frame of reference for the specific targets, the plan seeks to attain the following major goals:

1. Provide the means and opportunities for education, training, and utilization of human resources to help lead to fuller and more satisfying lives and at the same time contribute the maximum measure of skills to economic growth.

2. Increase productivity and, in general, develop both agricultural and nonagricultural sectors of the economy in such a way that they will function in a complementary manner, having regard for the current importance of agriculture to the economy in the country, and to achieve a set global rate of growth.

3. Increase the GNP at the rate of between 5-7 percent per year to enable appreciable improvement of the living standards of Aurorans.

4. Eliminate balance of payments problems within a ten-year period by greater exploitation of and export of its mineral resources.

5. Establish effective government organizations, private enterprises, research institutions, and other institutions that make possible better use of resources and implementation of development objectives.

Consistent with these broad goals, the plan contemplates specific programs to achieve the goals and to remedy the various problems of Aurora. The programs are discussed as follows:

I. Education

A. Literacy. A high degree of illiteracy as found in Aurora is considered a limiting factor in improving productivity in the farms, not to mention its social and political implications which can delay achievement of set development goals, Thus, the following measures are recommended:

1. Conduct literacy campaigns through creation of local groups and committees of devoted community leaders, the committees to be coordinated closely with the Ministry of Education for financial and technical requirements.

2. Utilize on a massive basis radio and visual aids and circulate materials to impart basic education and knowledge of skills.

B. Elementary Education.

1. Raise the percent of accommodation of children of school age to the maximum. This, of course, will mean opening of more schools in the villages. As it is, the Auroran Government's scheme of compulsory and free elementary education has been rather premature in view of budgetary constraints. This, therefore, further suggests the need for more money to be earmarked for the expansion of elementary education.

2. Reorient the content and philosophy of elementary education towards the environment of the children, including appreciation of rural living and the value of blue-collar jobs.

C. Secondary Education.

1. Expand the facilities of secondary schools in terms of funds, physical requirements, and personnel. This is necessary to produce an adequate supply of middle-level manpower which is directly related to the short supply of secondary school graduates. This program should also apply to second-level normal schools and post-secondary level pedagogical institutes.

2. Develop secondary schools in the rural areas to meet the needs of children of agricultural workers, and to help slow down population drift to towns and cities.

D. Vocational and Technical Education. The data of Aurora do not indicate the basis for the desire to establish 100 vocational training centers. In spite of the unavailability of these facts, it is clear that vocational schools should be established, for which the following measures are recommended:

1. Establish national schools on the basis of need for skilled workers and technicians within the area of the school, and the availability of raw materials and concentration of population that would insure the steady flow of students for training.

2. Adopt the curricula and courses which will meet the specific needs of industry of a particular area.

3. To meet adequate financing of vocational schools.

a. Require local governments to contribute to the cost of financial operation and maintenance of the schools.

b. Industrial firms in the area must share in the financial support of the schools--to establish a closer bond between industry and school.

c. Request appropriate international agencies for the provision of staff and equipment.

E. University Education. While no statistics are available with regard to enrollment and output of universities, indication is that the demand for university training is considerable with the projected expansion of the educational system and the various industries. Thus, it is specifically recommended that Aurora:

1. Study curriculum and courses offered in existing universities with a view to utilizing effectively present facilities in the direction of current and future development needs of the country.

2. Initiate research and statistical studies relevant to manpower.

II. Training (on-the-job)

A. Establish a central training authority where representatives of workers and employers must participate in formulating training policies, determining priorities and use of resources, and coordinating all training activities at the top level.

B. Work toward inclusion of on-the-job training clauses in collective bargaining contracts.

C. Conduct special training programs for workers in agriculture in relation to anticipated needs of the development goals.

III. Unemployment

A. Undertake road-building and other public projects.

B. Introduce and develop small industries and home crafts in the rural areas.

IV. Machinery for Planning and Implementation

A. Establish a central manpower planning agency close to the office of the President of Aurora to assure enough support for its plans. It is very important to have high-level status to be able to coordinate manpower activities at the various lower levels of the government. This body should concentrate primarily on planning and evaluation of the effectiveness of the programs. Actual implementation should be left to executive agencies. In brief , it should have the following responsibilities:

1. Prepare the manpower plan and policies of Aurora as an integral part of the overall development plan.

2. Evaluate effectiveness of the plan.